



RIVANNA WATER & SEWER AUTHORITY

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RWSA BOARD OF DIRECTORS Minutes of Special Public Outreach Meeting January 6, 2005

A special meeting of the Rivanna Water & Sewer Authority (RWSA) Board of Directors was held on Thursday, January 6, 2005, at 6:00 p.m. in the Monticello High School Forum, 1400 Independence Way, Charlottesville, Virginia. The purpose of the meeting was to share information and receive public comment on the James River Intake and Pipeline concept.

Board Members Present: Mr. William Brent, Mr. Michael Gaffney – Presiding, Mrs. Judith Mueller, Mr. Gary O’Connell, and Mr. Robert Tucker.

Authority Staff Present: Mr. Richard Defibaugh, Mr. Bruce Edmonds, Mr. Tom Frederick, Ms. Mary Knowles, Mr. Glen Recknagel, Ms. Michelle Simpson, Ms. Andrea Terry, Ms. Jennifer Whitaker, Dr. Robert Wichser, Mr. Lonnie Wood, and Mr. Roger Zieg.

Also Present: Ms Becky C. Christensen – Facilitator; Mr. Aaron Keno – Gannett Fleming Project Team Manager; Mr. Kurt Krueger – RWSA Attorney; City and County Government Officials; Albemarle County Service Authority, City, and County staff; members of the public; and media representatives.

1.0 Call To Order

The special meeting of the RWSA Board of Directors was called to order by Mr. Michael Gaffney on Thursday, January 6, 2005 at 6:08 p.m., and he noted that a quorum was present. He explained that due to the number of Board members present, legal requirements specified that this public gathering become an official Board meeting. No Board actions would be taken tonight. Minutes would be prepared and submitted for Board approval.

Mr. Gaffney welcomed and thanked the members of the public for their attendance at tonight’s meeting. He commented that he hoped everyone would have the opportunity to sign the meeting register to provide RWSA with a record of attendees. The public was also invited to provide their e-mail address on the sign-up sheets, if they had not done so previously, in order to be included on RWSA’s e-mail list for updates on the Community Water Supply Plan process.

Mr. Gaffney next provided some background information for members of the public who had not attended a previous Public Outreach Meeting. He stated that RWSA has a need for increasing the available water supply to meet the future needs of this community. The South Fork Rivanna Reservoir Dredging, South



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Fork Rivanna Reservoir Expansion, James River Intake and the Ragged Mountain Reservoir Expansion were the four concepts selected for further consideration to meet this need.

Mr. Gaffney also stated that the purpose of tonight's meeting was for Gannett Fleming, RWSA consultant, to present its factual findings regarding the concept of the intake and pipeline from the James River as a method of increasing the community's water supply. Similar meetings were held in November and December 2004 concerning the South Fork Rivanna Reservoir Dredging concept and the South Fork Rivanna Reservoir Expansion concept. An additional Public Outreach Meeting will be held on January 20, 2005 to provide factual findings for the Ragged Mountain Expansion concept. All of these concepts are under consideration at this time.

Mr. Gaffney noted that it is RWSA's intent to provide factual information to the public on each of the four concepts, invite public questions and comments, and then clarify the findings before undertaking the process of selecting the preferred concept.

Mr. Gaffney commented that copies of tonight's live presentation, along with a one page fact sheet, are being made available to the Board and to the public tonight for the first time. Additional copies are located on the sign-in table located at the entrance to the Forum. This information would also be posted to RWSA's website. A Technical Memorandum from RWSA's consultant containing additional factual information on the James River concept is expected to be posted to Rivanna's website later this month for public review.

Mr. Gaffney added that after tonight's presentation, the public is invited to ask questions and offer comments on the information provided by the consultant. He asked that the discussion be kept positive, constructive, and focused on questions and ideas that will assist RWSA to make a complete decision. The Board has not made any decisions regarding the information being presented tonight and has an open mind. Please contact RWSA staff with any questions or ideas that arise after tonight's meeting. All comments would be considered and are appreciated.

Mr. Gaffney also noted that tonight's meeting was being videotaped by the Media Department of Monticello High School and will be aired in the near future over the local government cable station. The public could check Rivanna's website at www.rivanna.org later this week for information on the broadcast schedule.

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Mr. Gaffney next introduced Ms. Becky Christensen, who would be facilitating tonight's meeting. He stated that Ms. Christensen had facilitated two previous Public Outreach Meetings, and RWSA appreciated all her efforts during this public participation process.

Ms. Christensen thanked Mr. Gaffney and welcomed the members of the public in attendance at the third Public Outreach Meeting. She asked those in attendance to indicate by show of hands if they had attended at least one of the previous meetings. She next inquired as to how many were attending their first meeting. She stated that the community process is an important component of the whole Community Water Supply Plan study, and RWSA appreciated the input received from the diverse perspectives represented at these meetings.

Ms. Christensen then briefly reviewed the meeting format, which was similar to the first two meetings. During the next 30 minutes, Gannett Fleming would present detailed factual information on the James River concept. Following the presentation, the public would have the opportunity to ask questions and provide comments on the information provided by the consultants. She requested that all speakers identify themselves and direct all questions and comments into the microphone so that they could be recorded for the meeting minutes.

Ms. Christensen next referenced the "Requested Guidelines for Participation" that were included in the meeting agenda. She asked that topics be focused on the James River concept. She reiterated the importance of speakers identifying themselves and their organizations and to speak into the microphone. In order to afford everyone the opportunity to provide comments at this meeting, speakers were requested to limit their remarks to 3 minutes. Prepared written statements that took longer than 3 minutes to read, could be submitted to RWSA and would be posted to the website.

Ms. Christensen also requested that questions from the audience be held until the end of the presentation, which as she previously stated would take about 30 minutes. Questions that could be answered in one to two sentences by the consultant and would add clarity at that point in the talk would be entertained during the presentation. It was RWSA's intent that all questions from the public would be addressed in a manner that increased the community's understanding of the concept under consideration and would also provide an opportunity for public input into the process.

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Ms. Christensen next introduced Mr. Aaron Keno, Vice President of Gannett Fleming, who would be presenting the factual information on the James River concept.

Mr. Keno thanked Ms. Christensen and stated that he appreciated the opportunity to participate in tonight's meeting and to answer questions from the public concerning the information provided during his presentation.

Mr. Keno first briefly reviewed the presentation Agenda, which included a discussion on background and current conditions, the evaluation approach, concept description, water supply parameters, pipeline issues, environmental issues and impacts, cost estimate, and facilitated input.

Mr. Keno stated that as many in the community are probably aware, water supply investigations in this area have been underway for several years. In July 2004, a supplemental evaluation was completed that summarized the historical information and moved forward based on new data developed during the recent studies. Detailed investigations are underway on the four water supply concepts previously identified by Mr. Gaffney. Public Outreach Meetings have been held for the South Fork Rivanna Reservoir (SFRR) Dredging and SFRR Expansion concepts. As the Technical Memorandums become available, they would be posted to Rivanna's website.

Mr. Keno noted that the overarching theme of this evaluation was to "select the least environmentally damaging, most practicable alternative," which was based on federal and state regulations.

Mr. Keno next discussed the evaluation approach. A representative James River withdrawal and pipeline project was identified, which entailed an intake near Scottsville and the selection of a raw water pipeline that extended from the James River to the Observatory plant. If this concept was advanced as the preferred alternative, the route might be modified in final design. Environmental impacts would be similar regardless of its configuration. Based on RWSA size facilities at peak flow conditions, the average daily flow of 9.9 MGD times 1.5 equated to 15 MGD. This concept satisfies the entire projected 9.9 MGD water supply deficit.

Mr. Keno further stated that this concept might also include regional cooperation with Fluvanna and Louisa Counties. Regional elements could include a combined withdrawal, an intake location in Fluvanna County, multiple pipeline routes, and service from an eastern-based location.

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Mr. Keno then reviewed the raw water source evaluation related to quality issues. He stated that the James River is used as a community water source from Lynchburg to Newport News. Richmond is currently in 100 percent compliance with drinking water regulations. Henrico County just completed a 55 MGD water treatment plant. Water quality is generally better upstream than downstream. The conclusion related to quality is that the James River is suitable for use as a drinking water supply using conventional water treatment plant processes.

Concerning the quantity issue, Mr. Keno reported that a very large drainage area exists in the James River watershed near Scottsville. The 15 MGD peak rate discussed previously is only about 4 percent of the James River statistical low flow, which is about 338 MGD. While the water would be withdrawn from the James River and pumped to the RWSA Urban system, a majority of that water would be returned to the James River through wastewater treatment plant discharges. The net impacts on the James River in terms of quantity would be negligible.

Mr. Keno referenced the next slide which illustrated potential locations for a James River intake. He noted the area immediately upstream of Scottsville and land parcels located in that vicinity. All of the areas identified on the graph are reasonable locations, and a specific site has not been chosen for the intake at this time.

Mr. Keno stated that an example of a side river intake with a raw water pump station is pictured on the next slide. He explained that water is taken into the surface of the intake structure, goes through screens to remove debris, travels through piping between the intake structure and pump station, which moves the raw water to its destination.

Mr. Keno noted that the following slide contained a photograph of an intake structure under construction. The picture was taken downstream alongside the face of the intake structure. He pointed out the coffer dam, which is a temporary structure built to hold the water away during the construction period. He also noted the intake screens, which are large barrel-shaped objects with very small holes that provide the filtering of the raw water. A pipeline runs from each barrel that traverses back to the raw water pump station. A protective wall is located in front of the intake screens, which keeps larger debris from striking the intake structure.

Mr. Keno next discussed the pipeline element. He stated that once the water leaves the raw water pump station adjacent to the intake structure, it would move

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parallel to a roadway towards Charlottesville. The maximum elevation change between Scottsville and Charlottesville is approximately 420 feet. There would be two booster pump stations along that route. Design considerations would be handled as the project moved forward. Important elements to consider in the design are the flow velocity and pipeline material.

Mr. Keno referenced the next slide which illustrated the pipeline route. The course currently identified is along Route 20 to Interstate 64 and then along Interstate 64 into the Observatory plant. Mr. Keno reiterated that there would be two booster pump stations between Scottsville and Charlottesville.

Concerning the pipeline description, Mr. Keno commented that the currently recommended size is a 30-inch diameter pipe. The final design size could change as flow requirements are further evaluated.

Mr. Keno noted that examples of the exterior and interior of a booster pump station were pictured on the next slide. He noted that the exterior appearance of the structure could be modified to meet any historical requirements of the area.

Mr. Keno then highlighted the main issues concerning pipeline construction. He stated that the picture on the next slide illustrated an open trench installation done in a pavement setting. This type of construction keeps costs down and minimizes traffic impacts.

Mr. Keno noted that the following slide pictured another type of open trench construction that is used while installing pipeline along the shoulder of the road. The contour of the slopes provides for more work space.

Mr. Keno commented that although the majority of the pipeline construction for the Scottsville to Charlottesville route would involve the open trench construction method, there could be situations where "trenchless" methods would need to be employed. This technique is used to go under roads, streams, or other obstructions where the ground surface could not otherwise be disturbed. An example of the jack & bore method was illustrated on a slide. Pits are excavated on each side of a roadway. A boring machine is placed in one of those areas, which drills into the earth and removes the material. A section of casing pipe is pushed into that hole and lengthened by attaching additional sections until the pipeline has crossed the obstruction. The casing pipe used for this method is larger than the one used to carry the raw water. Once the casing pipe is in place, the water pipeline can be inserted through it.

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Mr. Keno stated that the next slide illustrated a directional drilling project, which does not require the jack & bore process. This method allows for the excavation of a pilot pole of a smaller size and the water pipeline is then pulled through this area. This type of construction can be used for a variety of purposes. Further evaluation would be needed to determine the most appropriate types of pipeline construction to employ during this project.

Mr. Keno next addressed the issue of utility crossings. He stated that there are regulatory requirements concerning existing water and sewer mains. Other issues could include gas, oil, electric, and fiber-optic cable and would be addressed during the final design. This type of pipeline could be fairly easily modified so that it could be moved around, under or over obstructions to adjust to the existing environment.

Mr. Keno next reviewed the issues concerning stream crossings. He reiterated that stream crossings could employ "trenchless" construction methods. Stream crossings would be evaluated individually to determine the most appropriate construction method. An open cut method could possibly be used on some of the smaller streams, if properly protected and permitted, and the streams restored to their natural conditions.

Mr. Keno further stated that there were property acquisition issues along Route 20. It was their understanding that the Virginia Department of Transportation (VDOT) did not own a right-of-way on Route 20 but had proscriptive easements on that road. This meant that VDOT had the right to maintain the road but would not allow them to transfer the easement to RWSA for construction purposes. RWSA would be required to obtain both permanent and temporary construction easements along the entire route.

Mr. Keno referred to the next slide which listed the key environmental issues, which included cultural resources, wetlands, streams, threatened and endangered species, and recreation. He stated that in general, the environmental impacts were very low.

Mr. Keno first addressed impacts to cultural resources. Concerning architectural issues, he stated that Scottsville and Southern Albemarle have been identified by the Virginia Department of Historic Resources (VDHR) as historic zones. During pipeline construction, special consideration would need to be given to potential impacts to existing architectural features in that area. The design and construction of the exterior of buildings might need modification in order to be compatible with that environment.

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Mr. Keno next discussed the archeological impacts with this concept. He stated that this project would likely require some additional on-the-ground assessments once the final configuration has been determined. The James River area would also likely require additional study, as architectural features are often found along large water bodies.

Mr. Keno added that it is their belief that the cultural resources impacts would not threaten the feasibility of this concept due to flexibility with the pipeline location.

Mr. Keno then looked at the wetland impacts due to pipeline construction, which he stated were very low. There would be impacts to 0.18 acres of forested wetlands and 0.05 acres of emergent wetlands for a total of 0.23 acres. The impacts to the emergent wetlands would be temporary, so the total permanent wetlands impact is 0.18 acres.

Mr. Keno commented next on the stream impacts. He stated that there were about 30 stream crossings along the proposed pipeline route. Regulations require that RWSA mitigate equivalent ecological value of stream impacts. There is a prescribed process for evaluating each of those streams in terms of water quality. Improvements could be made through streambank stabilization or restoration projects.

Mr. Keno further stated that the James Spiny mussel was the only threatened and endangered species impacted by the pipeline route. Measures could be taken to avoid habitat modifications to that species, such as utilizing "trenchless" crossings.

Mr. Keno added that there were no permanent recreational impacts along the pipeline. With the side river intake, there would be no new dam constructed or obstructions that would interfere with the use of the James River. There would be some visual impact with the placement of the intake structure along the James River. He referred back to his discussion concerning the pump station on the Rappahannock River, which faced similar issues. The visual impact was mitigated through the design of the structure by reducing visibility and matching the exterior with known historic features.

During his discussion concerning mitigation costs, Mr. Keno stated that there were no cultural resource preservation issues at this time. Mitigation costs associated with wetland and stream impacts would total about \$300,000. This is a very low number when compared to the SFRR Dredging and SFRR Expansion concepts.

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Question from Ms. Liz Palmer: Inquired if the \$288,000 for stream compensation was for the 30 stream crossings referenced during his discussion on pipeline construction impacts.

Mr. Keno replied in the affirmative.

Mr. Keno continued his presentation and stated that there were no mitigation costs at this time for threatened and endangered species and recreational impacts.

Mr. Keno next reviewed the items included in the cost estimate for the James River concept. He noted that pump station electrical costs associated with the 420-foot elevation change between Scottsville and Charlottesville were unique to this concept. In order to account for this major expense so that a fair comparison could be made between the other concepts, this item was included on the list.

Mr. Keno then addressed the regulatory implications associated with this concept. As stated previously, the environmental impacts would be minimal and the regulatory response was anticipated to be positive. There would also be minimal impacts on the Rivanna watershed due to the location of the pipeline. RWSA would be one of several James River withdrawal permits under consideration at this time. Fluvanna and Louisa Counties are currently evaluating the James River as water source. VDOT approval would also be needed for the pipeline construction process.

Mr. Keno reported that the total estimated cost for this concept is \$49 million. The cost per gallon to provide the 9.9 MGD safe yield water supply deficit is \$4.96 per gallon.

Mr. Keno next reviewed the benefits and risks associated with this concept. He stated that one of the benefits is that it meets the entire projected 9.9 MGD safe yield deficit. There are also low environmental impacts, and there would be a negligible impact on the James River flow. There are easement acquisition issues that must be addressed, as well as a different contamination risk from the river. Conventional wastewater treatment and operations would be capable of removing or avoiding contamination.

Mr. Keno stated that this concluded his presentation, and he turned the meeting back over to Ms. Christensen for the facilitated public input segments.

Ms. Christensen thanked Mr. Keno and stated that questions for clarity would be taken at this time.

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Mr. Andy Wilson: "Is it the expectation that the water would then be discharged through Moores Creek back down to Rivanna?"

Mr. Aaron Keno: "As it is currently used by the customers of RWSA, the water is then discharged through the sewer system back through the wastewater plants and eventually makes it back to the surface water bodies and back to the James."

Mr. Andy Wilson: "So it makes its way back to the James along with Rivanna?"

Mr. Aaron Keno: "That is correct."

Mr. Andy Wilson: "What do you estimate is the percentage lost of the 9.9 gallons that would come up as opposed to what would go back?"

Mr. Aaron Keno: "We have not estimated that at this point in time. That is my best answer for you. It is a very small number. Typically in other systems it is a very small number."

Mr. Andy Wilson: "10 percent?"

Mr. Aaron Keno: "Something on that order."

Ms. Liz Palmer: "I have several questions for clarity. First of all, on his, how does that affect the flow of the Rivanna from Moores Creek and back down to the James? Will it affect the flow in that area?"

Mr. Aaron Keno: "No, not in a large fashion. The quantity of water that we are talking about that would be discharged as the system grows in the RWSA is a relatively small quantity compared to stormwater runoff."

Ms. Liz Palmer: "The \$288,000 for streambank restoration ... I'm under the impression that streambank restoration is extremely expensive. Do you have an estimate on how many feet in streambank restoration you are going to do for those 30 streambank crossings?"

Mr. Aaron Keno: "I don't have that number off the top of my head. I believe we will have that included in our technical document."

Ms. Liz Palmer: "Did the \$49 thousand include the cost of proscriptive easements?"

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Mr. Aaron Keno: "The 49 million total cost? Yes it did."

Ms. Liz Palmer: "Did you have a quantity for the acquisition of those easements?"

Mr. Aaron Keno: "Again, not off the top of my head."

Ms. Liz Palmer: "You are going to pump this back up to Observatory Hill. I'm assuming that you are going to have to do a lot of changes with respect to Observatory Hill. What are your thoughts on that?"

Mr. Aaron Keno: "At this stage for this concept, as we have for all of the other raw water concepts, we are evaluating raw water only. The water treatment plant elements will be evaluated when we get to the alternatives that will satisfy the whole deficit. So, we haven't evaluated the water treatment plant on this concept as we haven't on the others. It's an apples-to-apples comparison of the concepts."

Ms. Liz Palmer: "But it is quite a bit different for revamping Observatory Hill rather than increasing capacity at some point at the South Fork Rivanna treatment plant."

Mr. Aaron Keno: "There could be some differences in the treatment plants. Those variables would be very small compared to the overall expenses of the raw water."

Mr. Ed Imhoff: "I live in Keswick and I'm a Hydrologist. Question about cost ... the \$4.96 per gallon ... I'm assuming that all your costs are inclusive in terms of comparing them to the various alternatives in terms of length of time, replacement, operational maintenance, original capital cost. Is that true? I looked at some of your fact sheets, you don't seem to have a control for the cost. In other words, if this is \$5.00 per gallon, I assume that all the costs, same infrastructure, same everything, everything is equivalent. How does that compare to the expansion of the reservoir per gallon? How does that compare to the business of dredging per gallon?"

Mr. Aaron Keno: "In each of the presentations, I believe we have given a similar comparison on cost in gallons provided in safe yield benefit. I don't have that comparison for you tonight, but that information will be posted on the Rivanna website so you will be able to look at that and compare those costs one to the other. You also asked the question about operating costs. We have looked at capital costs and then pulled out any large operating costs, like the electrical costs

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in this case. We didn't feel that it was a fair comparison to only look at capital costs if one has a very large operating cost associated with it. That is what we have attempted to do in order to make it an apples-to-apples comparison for all the concepts."

Ms. Becky Christensen: "Your desire for a comparison of these consistent variables across the alternatives will be addressed in the future, so you can take a look at that. The public will be able to access that."

Mr. Julian Noble -- Albemarle County: "Do you have any ways for any extra storage capacity for this water? Have you designed a reservoir and where it's going to be? Is there going to be any immediate storage?"

Mr. Aaron Keno: "There are no additional storage requirements associated with the James River pipeline to provide that 9.9 MGD. None are planned at this time as they are not necessary."

Mr. Julian Noble: "Do you have any plans to do something in case there is a major spill or risk of contamination and a way to prevent them from getting into the pipeline system to start with?"

Mr. Aaron Keno: "That is a great question. You may recall in the presentation we used the word 'different sort of risk' associated with contamination. It is different than a storage reservoir. Each have their own risks with contamination. As you say, a spill is one of the largest risks on a large river like the James. Primarily, what is done in those cases is that a monitoring system is put in place upstream of your intake to monitor the water quality. Locations are selected in a way to give you enough reaction time. What you do is shut down that intake until that threat passes. Typically, on a spill threat, that does not take a great deal of time. You have enough provisions elsewhere in the system so that you have water supply to last through that period."

A citizen whose name was not identified asked the following question: "So we react to an environmental issue; we cannot prevent it by having a supplier control over our own water supply. So the risk you take in order to facilitate developers and builders, who are here tonight, is to yield our local supply and take the risk that we can respond appropriately to any sort of contaminant. Is that what I am understanding?"

Mr. Aaron Keno: "This is a typical method for drinking water supplies, utilizing major surface water bodies as water supply sources. It does in fact give you the

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reliable boost in safe yield, but there are issues which deal with that particular one as there are with the reservoir. Let me give you a comparison. If you had a contamination issue in a reservoir, you would be stuck for much longer period of time because you have all of that water that is contaminated in the reservoir. That is why we use the word 'different.' There are different sort of threats associated with different types of water sources."

A citizen whose name was not identified asked the following question: "How vulnerable would the intake structure be to flooding? Are there any emergency power generators or an alternate source in case the power went down?"

Mr. Aaron Keno: "Yes, those are typical provisions that are done and handled as part of the final design."

Follow-up Question: "How vulnerable would the facility be to flooding?"

Mr. Aaron Keno: "They are designed so that they are able to withstand any play of events."

Ms. Liz Palmer: "I have one more question for clarity. What is the distance from the wastewater discharge in Lynchburg to your intake at Scottsville?"

Mr. Aaron Keno: "I don't know that number right off hand, but I know we checked with the Health Department. I have an indication that there is no wastewater discharges for at least 30 miles upstream."

Ms. Christensen interjected that one or two more questions for clarity would be taken but would like to commence the public comment segment as well.

Ms. Leslie Middleton – Charlottesville City: "I'm not remembering from the other presentations where you talked about how long to accomplish the deed once it is selected. Are you doing a comparison? Have you made an announcement?"

Mr. Aaron Keno: "You are asking me the overall schedule to select an alternative and implement?"

Ms. Leslie Middleton: "No, I'm asking how long to accomplish an alternative and are these alternatives different?"

Mr. Aaron Keno: "Yes, each would be different. You have a long line of pipeline to construct. That is going to take years to get constructed. There is no

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comparison in the terms of the comparison of one concept to the other at this point in time. You would have to start that project in time based on when your needs are so that it is completed at the time in which you need it.”

Ms. Leslie Middleton: “That decision will be fed into the decision tree, correct?”

Mr. Aaron Keno: “Correct.”

Ms. Gerry McCormick Ray –Albemarle County: “I’m afraid about the intake structure and whether or not you’re taking water directly from the shore or are you going to reach out and go farther off shore into deeper mid-water?”

Mr. Aaron Keno: “With a side river intake, water is taken from the shore. What you saw on the slide is as far out as it reaches. Normally, the water quality that we can get there is very good. Although sometimes there is a perception that there is cleaner water in the center. That is not always true, particularly during rainfall events when there is a lot of sediment moving through there. A lot of that is carried by the higher flows, so you would be pulling in more sediment.”

Ms. Gerry McCormick Ray: “Is that what you looked at, the hydrodynamics around the area?”

Mr. Aaron Keno: “We considered that in terms of the types of structures that are being built now and the performance of those structures. This is the preferred structure at this time. There is another issue with going further out into the river, and that is the environmental impact associated with constructing that sort of a feature. The side river intake also has minimized the environmental impacts.”

Ms. Gerry McCormick Ray: “The fact that you are looking at it and it’s being evaluated What fluctuation is going to occur?”

Mr. Aaron Keno: “We have identified the locations that I showed in the graphic upstream of Scottsville. We have evaluated those areas in terms of the environmental impacts that were projected here based on on-the-ground ...”

Ms. Gerry McCormick Ray: “I mean, more in terms of hydrodynamic impacts or changes or sedimentation.”

Mr. Aaron Keno: “Those aren’t things that we would look at during this level of study and not necessarily things we would be needing to look at until the final design.”

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Ms. Becky Christensen requested that citizens wishing to make comments to come forward at this time and form a line behind the microphone.

Mr. Richard Collins: "I missed part of the earlier session, so this might have been addressed. I was aware of the fish advisories due to the PCB in the James River, and I'm aware that you can withdraw the water from such rivers and treat it. I'm going to ask two questions. Is it in your mission theory that the treatment costs would be pretty much the same for the same degree of environmental concern or health concerns from the James River as opposed to some package of the options within the watershed?"

Mr. Aaron Keno: "There is going to be some variability of the treatment plant processes that are required. We don't think that there will be a large degree of treatment plant costs differences, although we haven't evaluated them at this time. Those will be evaluated with our alternatives as we advance from these concepts and pick an alternative to satisfy the deficit. Then we will put the treatment plant features back in, evaluate them, and the costs will be accounted for."

Mr. Andy Wilson – Rivanna Conservation Society: "I have three comments. The first one is there has been concern expressed about if we don't take this option, we might lose our place in line to get water out of the James River. In a meeting held in November, in Albemarle County, Joe Hassell with the Commonwealth Department of Environmental Quality said that's absolutely not a problem. He said we would not lose our place in line. There is enough water in the James that we would be able to come back again many years hence if we needed it.

"Second comment is about cost. There is a tremendous cost to this project. Since it gives us more water than we need right now, I'm not sure if it is fair to ratepayers to ask them to pay for the debt service involved and the higher rates involved. The problem with this project in terms of cost is that it can't be phased in.

"My third comment is that there is an issue that needs to be dealt with before we move ahead if we do select this option. That is the expense of closing down the South Fork reservoir at some point. I understand that this is controversial, but I think that a study needs to be done before we select this option so we can know what the costs to the ratepayers is going to be if we have to deal with the reservoir that is silted up. Thank you."

Mr. Jeff Warner – Charlottesville City: "Frankly, I came tonight rather cranky. A lobbyist for the Chamber of Commerce circulated an e-mail alarming his Chamber

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members that these meetings have been primarily attended by environmental types. You can see by the group that is here that this obviously caused a great deal of alarm to the development community. I think that is rather interesting. You referred to the potential for a route through Fluvanna, but you don't discuss it. We all know what the prize is at Zions Crossroads. This is an announcement that is done by the Thomas Jefferson Venture projecting a need for 502 million gallons and something like a \$22 million cost. At what point in time do we begin to discuss what I really believe is going to happen is a discussion for Fluvanna.

“The second thing you talked about ... contaminants. What possible contamination concerns would I have for our own local water supply. The reason I'm angry is I'm talking about my wife, my two little kids; this is our drinking water. This is about me; this is personal. It's not business as it is to these gentlemen here. Why would any rational person in this community want to yield local control of our local water supply? It's absurd. PCB's in the James River 'a different risk of contamination.' We have the town of Lynchburg, and we expect it again in this legislative session, takes punitive action against this community relative to transportation issues. How in the world would we expect them to work with us actively relative to water supply. I realize you are a consultant; I'm not upset with you. This community better wake up because it's not about making sure we have enough water. It's about making sure we have enough water for all the development that is planned. I would like to retain local control of my local water supply for my family. Thank you.”

Mr. Carlton Ray – Environmental Scientist and President for Citizens for Albemarle: “We were told to be positive, and I'm struggling to do that. First thing, I want to take up with Jeff's point. This County maintains and endorses a policy of sustainability, which is exactly the point he is making. In-house, in-County supplies should be supplied first. The outside subsidies, if ever, should come way late. Of the four, this is a bottom in my view because of that policy of the County as has been suggested.

“The second , that might be included much better, is watershed planning. I know it is not your responsibility to do that; Dennis Rooker – there he is right over there; that's his responsibility ... decent planning for the watershed itself in terms of zoning and so on. We don't have a watershed plan, and if we don't, you are going to get sedimentation, pollution, and all the rest of it.

“The third point is the other services. I'm not satisfied at all that the stream crossing issue has been resolved according to what I've heard. There are a lot of problems with that one; I won't go into it. The other one is that it's biodiversity

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itself. Water supplies a lot of things to a lot of critters, and right now we are only considering ourselves. We are not taking into account the biodiversity report that has just been released by the County of Albemarle Biodiversity Work Group.

“The last one is water wars. We are all told that there is a lot of water ... 4 percent ... 5 percent ...but 1 percent by everybody is going to lead to a lot of litigation down the road, and not if it’s coming. We heard this about the Colorado River. You can’t have a discounting that kind of innuendoes, some of which are in conflict with each other, is just sense and not down the road somewhere have a whole lot of problem with the water wars. That gets back to my first point. Let’s take care of our own County within our own resources. I know that sounds like limited development. Indeed it is. The developers won’t tell us what their limit is. They don’t tell us, but I think this has a limit. Thank you.”

A citizen of Albemarle County whose name was not identified stated: “I’m opposed to taking water out of the James River for similar reasons, one being sustainability. Clearly, in my opinion, Albemarle County has already undergone unrestrained development and that clearly our natural resources can not support or even considering this option. I think this would open the door to further unrestrained development. You address a set of environmental implications of the project, including two pump houses, but you have not addressed the ultimate environmental and aesthetic implications of on-going, unrestrained growth development in Albemarle County.”

Ms. Liz Palmer stated that she had a question for Mr. Tom Frederick as follows: “I’ve been reading an awful lot about comprehensive drought management plans and trying to really understand what other communities do for comprehensive drought management. It’s becoming kind of clear to me that many communities develop these comprehensive plans to try to manage risk during low flow periods. When we talk about developing our water supply plan on safe yield, we are really talking about very unusual events when we are going to run out of water. From year to year, mostly we are not going to do that. Apparently, a lot of communities save millions and millions by developing these drought management plans and putting them to effect. Where is Rivanna on that at this point in time? If you have a drought management plan, would you consider reevaluating the demand analysis if it showed we may not need the quantity of safe yield that we previously decided we needed?”

Mr. Tom Frederick: “Concerning drought management plans, the questions you raised are very important. It is very important that utilities have an on-going drought management plan and refine those accordingly as the systems change.

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This community went through a severe drought in 2002 and immediately after that, staff took some effort to evaluate what happened during that drought. There are some rules already available on how Rivanna would go through a similar situation were it to occur again. We're in the process now of refining that; we want to make it continuously better. I think it can be better than it is today. We've had some on-going discussions with some agencies in that direction, including as you well know The Nature Conservancy (TNC) and their consultant Hydrologics, who had some very good ideas in programming on how to do drought management. Drought management from a supplier's perspective is how to take the resources that you have and manage them best through a period of drought. We provide wholesale services to the Albemarle County Service Authority and City of Charlottesville, and they have retail responsibilities.

"In terms of demand issues, it's the responsibility of those two agencies to take a primary role in providing water conservation plans. I personally think, having been in this business for a number of years, that an on-going program – and we have that here – that helps people understand how best to utilize water is a very effective way of providing for demand issues. You still need policies that you put in place during drought periods and that's part of managing a drought. You hope not to have to impose too great of restrictions during a drought. You hope that the plan you do upfront will help people to learn to conserve water. We are in a country where people are free to do the things that they want to do, so educational programs work better for some than for others, and that is true in every community. I would say from my history of comparing this community with other communities I've worked in, Albemarle and Charlottesville are far ahead of most communities in terms of water conservation efforts. That is not to say we can't do more and that is not to say we can't listen to suggestions that others may have. I think we are well on our way to accomplishing that."

Mr. Richard Collins – Charlottesville City: "I am looking forward to the comparisons that we have been promised at a later point in which we could look at all the important economic and ecological variables and some common standards so that we can more reasonably compare these choices. As some of you know, the group called the Advocates for a Sustainable Albemarle Population, of which I am an enthusiastic member, has presented a perspective on this planning process that says essential to two major choices - both of them affect land development as well as water supply and they are inexplicatively plowed. We feel that the choice is essentially between an in-watershed option, which is really a package of crop lands that would support an additional rate of growth and an optimal population that would probably be limited by the available water supply and under some concept of safe yield. The other watershed option, which is

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essentially the James River pipeline, would mean that given the capital costs that would go into it, water probably never would be a constraint on land development. If anything, it would probably expand the capacity not only in number but in geographic scope.

“I would like to make a couple of comments on that because I can see the choices that are there. I think we should, in my view, be very candid about it. The issue is in some way the extent of growth that is likely to be accommodated by the various water supply options. It has been pretty clearly stated in the past that we should not let our water supply dictate our land development, but then maybe the land development plans should dictate the water supply. One or the other. More appropriately, how do we integrate those? It is my view that we should have the four as a choice of the in-watershed option with a back-up for emergencies in all the other things that we all see in an integrated plan that would show about how much more the population could increase under the favorable options in-watershed. What that number would be should be given to the public, and then we should ask the members of our communities – Albemarle and Charlottesville – and others for that matter – is that number too few for the way we want to manage our community to kind of stabilize the population, or is it enough or maybe even too much. If it isn’t, then maybe we should go out of the watershed to find water supply from another basin or far away with even increased list, if we sincerely believe that it’s just not the population that we think would be adequate for our cultural, governmental, and economic needs. So, I would encourage the development community to look at that option, because we have tried to draw them into discussions.

“Is the issue one of perpetual growth driven by some ideology or superstition or belief that we must constantly and continually grow or is there some number, some range of numbers, some plateau, some basis for agreeing on well this is about what we should strive for? If your number is different than my number, and I’m speaking not the magic numbers you could understand, but of a range that citizens could imagine related to car parking, trips, number of acres that would be needed, and all the things that we would associate with those different scenarios. I think that this is the best end to that to be undertaken that requires open discussion as you have done.

“I think that we should therefore put to the consultants, not just water supply or technical considerations of this kind or that kind, but we should confront the full range of issues in this forum and have this forum inform the others that it is significantly concerned with comprehensive plans and the time frame for land use planning and not your scenarios for water supply alone. Thank you.”

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Mr. Neil Williamson – Free Enterprise Forum: “In deference to my friend, Jeff Warner, I thank folks from all the communities – environmental business, and otherwise - that came out. These meetings have been very informative. I also believe that the comparison in the end where we include significant outside influences, such as the electrical power needs of this option, should be weighed. I think that perhaps we should consider any significant changes in the water treatment as well when we do the final analysis of these four options. That being said, I think we should not have this wide range of discussion regarding population control. We have very specific needs. We have been given a very specific number that we are trying to meet. The Rivanna Water & Sewer Authority has been provided the challenge to meet that number. I commend you for coming forward with options. I hope that we can rely on the science, the economic data, and the environmental data to make the correct decision, and I applaud your efforts thus far. Thank you.”

Mr. Ed Imhoff: “I’m going to claim a membership on the State Committee on Water Supply Planning. There are two other people from here that are on it – Mike West and Judy Dunscomb. One of the issues that came up increasingly and will be presented to the Legislature this year as a draft rule was to get a balance in water supply planning to instream flow needs. The presentation tonight by your, I think rather excellent consultant, focuses on least environmentally damaging. That’s all you have to do, and you do it very well. Each of these alternatives also has the potential to do something positive for instream flow, and that is something that I would think that either the staff of the Rivanna Water & Sewer Authority, or I suppose the County and the City, needs to invest. For example, my question could be: If you bring in water by pipeline from the James, does this mean that you can pump some water down and restore the Moormans River? Does this mean you can run water down from Sugar Hollow ...into the South Fork Reservoir for a while? What does this mean? They aren’t just making impacts of water supply development. There can be positive impacts. There can be win-win; I’ve seen it all across the United States. My closing statement is I hope that we see the County gets involved in looking at this other side”

Mr. Dave Phillips – Forest Lakes subdivision in Albemarle County: “I came here because I thought we were talking about water, and it’s kind of gone other places. I just know that when I turn on the water, I expect to be able to have water come out of my pipe and it should be nice and clean. That’s why I moved into the Forest Lakes area so I could have that and wouldn’t have to worry about wells and all that stuff. The drought we had two summers ago was terrible. Nobody enjoyed that. We learned a lot of lessons from it. That was the good news, but we don’t want to go back there. We’ve been very fortunate that it’s been raining like

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crazy since then. It's not going to do that forever. We are going to have a drought, and if this option of piping water in from the James is the best thing we have on the table – it's not my first choice, which isn't even on the table, which would be to maintain our own local water supply by building a reservoir on Buck Mountain ... Since we are not allowed to even consider that, thanks to environmental regulations, this is what we are left with. We've framed the argument, and this is the answer. Whether we like it or not, we've decided as a nation through regulations that we can't build reservoirs anymore. I'm no environmentalist or water scientist, so I don't know what the environmental impacts are. I just know I think reservoirs are pretty, and they have some recreational use to them. Pipelines don't. At the same time, this is a solution that will last us for many, many, many years. The price tag, while it is high, is the time period that this will generate water for us. Brilliant ideas of using that water for helping the flow in the Moormans, or whatever, are all great ideas, and the price tag is well worth the amount of money so that the citizens that already live here don't have to go through a drought situation and having to put buckets in the shower or whatever we did. It isn't worth it again. This is a great option, and I want to move forward with it tomorrow.”

Mr. Bob DeMauri – Thomas Jefferson Partnership: “I just like to make a few comments. I know the Rivanna Water & Sewer Authority is focused on solutions to its particular needs and needs to provide an extra 9.9 MGD over a certain period. Some mention, of course, was made about Fluvanna and Louisa Counties and their initiatives to take water from the James and to address the needs at Zions Crossroads. The only thing I would add – I know there were concerns about developers and development and what the future of our region is all about – but I think we all know that development is happening rather rapidly beyond Albemarle County. I would encourage the Rivanna Water & Sewer Authority to at least seek the opportunity to maybe partner with those other counties that are looking at a James River option for a couple reasons. Number one, I think it's certainly going to be more cost effective to collaborate and become more regional in our approach to solving the water problem, which in fact is a regional issue. At the same time, I think it would enable the communities to learn how to partner better together to address other development issues that are all of our concerns. Albemarle may continue to protect everything that it wants to protect, but if our regional growth is not of the quality we all want, then ultimately we all suffer. I would just encourage a strong look at the James River option and to do it in a collaborative way, which in turn may become more economical because there may be more opportunities for additional financial resources from outside of this area for a truly regional project.”

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Mr. John Via – Charlottesville City: “I’m one of the few who lived through the land acquisitions on Buck Mountain ... At that time we tried to talk to Rivanna to go to the James River, and they didn’t want to hear it.. To me this is the best alternative because it’s an unlimited water supply. Even in 2050, what do you have to do if you need more? Add a bigger pump to maintain the service? If you worry about pollution, I’d rather have pollution on a 20-mile pipeline rather than a big lake up there. Also, you don’t have to worry about dredging. Thank you.”

Mr. Tim Hulbert – City of Charlottesville: Mr. Hulbert stated that he was a resident for four years, worked with the Chamber of Commerce, contributed to The Nature Conservancy, and attended St. Thomas Aquinas Church. He made the following comments: “I drink the water, as does my family and the people I work with. I just want to applaud you for the very open process and open-minded approach in looking for solutions to the challenge that face us. I don’t know what the right answer is. I don’t know if we all do or individually know. Some people seem to be certain about everything. I’m one of the people that the older I get the less certain that I become of almost everything. I just think you need to do like Rich says, at some point put all the pieces out there so we can look at them and hopefully an elegant solution will emerge. Doing nothing, which is what we have been doing for quite a long time, is not a solution. We certainly know that, and I imagine some of you cannot even agree on that. We ought to be able to agree that doing nothing to control the use of water and regulate the use of water and to have enough water to service the people who are here already ...we learned two years ago that’s in jeopardy ... not to mention the people who will come or our children who might want to stay, if they can find jobs. Go forward and get a list of options, including this option, which looks pretty good to me in a sort of uninformed way tonight. Then come to a point where we could actually make a decision as a community so we can still turn the tap water on and get good clean water that we can drink and our children can drink and our cows can drink. Thank you for having us.”

Mr. Ivo Romensesko: “I guess I could also be included in that category with Mr. Hulbert as one of the Chamber guys. The charge as I understand it of the Authority is to provide adequate safe supply of water to the community. Not necessarily to control the size of that community – to look to expand it or contract it – but specifically to provide the adequate supply. It seems that technology and the engineering is there to provide that safe supply and if the Authority needs to keep moving forward on developing the sources that are necessary. The river seems to be a good option. It needs to be considered very seriously. I think it is one of the best options because it does provide a large potential volume through a variety of seasons and a variety of intense rainfall periods or eras. I think a long-

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range plan must include both the environmental issues as well as the human issues that we experience. To have only environmental issues be considered might cut us off from quality of life that we have come to expect in this area. Some feel as though economic development is almost a dirty word. Actually, a strong and viable economy is essential to have good quality of life, so there is balance that is essential. I think the Authority is charged with considering that balance. Again, its charge is to provide adequate supply.”

Ms. Liz Palmer: “I just need to say this. I look at the James River concept as extremely expensive. More expensive than the numbers you have given us tonight. Those reasons are first of all that the James River is not going anywhere. It going to be there for a really really really long time. This supplies 9.9 MGD, which is all that we need. We don’t need 9.9 MGD right now. We need a much much smaller number than that. We have given a list of alternatives that phase in more water for us as we need it. If we say by 2030 we need 4 MGD, than that price of the James River is really more what you would get on 4 MGD. There have been alternatives given to us that supply what we need for right now. It’s very hard to tell really what we do need for 2050. We have not looked at what the cost for abandoning our present water supply is. That is why it would be a lot higher than you think that it is ... dealing with the reservoir issues. It is a cultural asset. It is a recreational asset. But if it does silt in, we have not gotten a clear idea on what those costs are going to be. I think we really really need to look at the whole picture when we are talking about the cost.”

Ms. Gerry McCormick Ray: “I think we need to compare our assumptions. What we are just assuming is that the James River is always going to be there and always going to provide us with clean healthy water. When in reality, the problems that we are faced with for the Rivanna is a problem of rapid change and mobilization of sediment and changes in our climate where we have a drought a couple of years and then extreme flooding in other years. As changes are going on, not only in the climate but in our habits, these are all creating value changes that are going to effect us – not only the quality but the quantity of water that we may face in the future. Assuming that we could always have a lot of water out of the James River and that’s going to be a panacea, I think you better question that and put a lot of recognition that it’s a big risk. Thank you.”

Mr. Jim Bonner – Albemarle County: “I didn’t attend the other meetings, but we are here to address the James River option. Oddly, the James River option to increase the water supply should not be considered an option at all. Current residents of Albemarle should not be burdened with the cost of expanding the water supply by the James River option to serve people who will be encouraged to

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move here as a result of such a pro-growth policy. The James River option would reportedly increase population, along with this, inherent by pollution, increased traffic, increased degradation of the natural watershed, and jeopardize the significant recreation and tourism benefits of the James River. It is the duty of the citizens of Albemarle County and the representatives to preserve the quality of life we currently enjoy for the benefit of our children and grandchildren and future generations. We now have the dubious honor of being named the best place in America to live, and the James River option of increasing our water supply by importing water from outside our own watershed would only encourage a reckless endangerment of the extraordinary quality of life we currently enjoy. Thanks.”

Ms. Christensen concluded the public comment segment of the meeting and thanked everyone for their comments and informed questions. She felt there was an increased level of understanding of this option and its complexities. She also expressed her appreciation to the citizens for their respectfulness while hearing a diversity of opinions tonight. She then asked Mr. Gaffney to comment on the next steps of the project.

Mr. Gaffney thanked Mr. Keno, Ms. Christensen, and especially all of the citizens in attendance for their participation and feedback tonight. He felt that a true cross section of viewpoints held by the community were represented tonight. In response to the citizens who commented tonight that they felt this concept had already been chosen as the preferred alternative, he reiterated that no decision has been made. The James River concept is one of four options still under consideration.

Mr. Gaffney also stated that on January 20, 2005, another Public Outreach Meeting will be held on the Ragged Mountain Expansion concept. He hoped that everyone in attendance tonight would be able to attend that meeting and would invite other citizens to join them as well. Sometime after that meeting, a joint meeting of the Albemarle County Board of Supervisors, the Rivanna Water & Sewer Authority Board of Directors, the Albemarle County Service Authority Board of Directors, and the Charlottesville City Council will be held to discuss all four water supply concepts under consideration. The information obtained from all the Public Outreach Meetings, along with any written statements submitted to RWSA on the Community Water Supply Plan, will be available for their review.

Mr. Gaffney reminded the citizens to include their e-mail address in the place provided on the sign-in sheets if they wanted to receive updates on the Community Water Supply Plan process and notices of upcoming meetings. The public could also access this information by going to the RWSA website at

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www.rivanna.org. Public Outreach Meeting information is located on the website, and tonight's presentation should be posted to that site in the near future.

Mr. Gaffney commented that many citizens in attendance represent organizations that were familiar with these four concepts. A speakers bureau consisting of RWSA staff as well as Board members is available to discuss any of the four water supply options as well as topics of particular interest to community groups.

Mr. Gaffney once again thanked the citizens for attending tonight's meeting, and he hoped to see them again at the January 20, 2005 meeting.

Mr. Gaffney adjourned the special meeting of the RWSA Board of Directors at 7:35 p.m.

Respectfully Submitted,

Mr. Robert Tucker
Secretary - Treasurer