

RWSA BOARD OF DIRECTORS
Minutes of Regular Meeting
January 26, 2004

A regular meeting of the Rivanna Water and Sewer Authority (RWSA) Board of Directors was held on Monday, January 26, 2004, at 2:05 p.m., in the Conference Room, Administration Building, 695 Moores Creek Lane, Charlottesville, Virginia.

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, Ms. Jennifer Whitaker, Mr. Robert Wichser, Mr. Lonnie Wood and Mrs. Mary Knowles.

Also present: Mr. Stephen Bowler – Natural Resources Manager for Albemarle County, Mr. William B. Ellis - Community Water Supply Plan Attorney, Mr. Aaron Keno and Mr. Tom Pursel – Gannett Fleming Project Team, Mr. Kurt Krueger – RWSA Attorney, members of the public and media representatives.

1.0 Call To Order

The regular meeting of the RWSA Board of Directors was called to order by Mr. Michael Gaffney on Monday, January 26, 2004 at 2:05 p.m., and a quorum was present.

2.0 Minutes Of Previous Board Meeting

Upon a motion by Mr. O’Connell, and seconded by Mr. Brent, the Board of Directors by a 5 – 0 vote approved the minutes of the regular Board meeting held on Monday, December 15, 2003.

3.0. Items From The Public

Mr. John Martin, Free Union, prefaced his comments with a statement that he had limited time to review today’s Board packet material due to a problem with the Internet service on his computer. He commented that from a watershed perspective, he was very concerned with the Community Water Supply Plan update as it appeared that new strategies would be considered along with a reevaluation of the existing alternatives. He further stated that the Community Water Supply Plan was developed after considerable time and expense and then updated in October 2002 based on the valuable experience gained during the drought. Mr. Martin added that both the Charlottesville City Council and the Albemarle County Board of Supervisors approved the plan unanimously. He also stated that the plan contained expectations of watershed protection and minimum instream flow for the future protection of our streams.

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Mr. Martin also expressed concern that the Mechums River Pump Station project would be put on hold and possibly abandoned in the future based on the consultant's comments. He stated that he felt reactivation of the pump station would result in some increase to the system-wide safe yield and would also bring an additional source of water into the reservoir system that would otherwise be flowing over the Rivanna dam. He added that this would allow for the retention of more water in the Sugar Hollow Reservoir for a longer period of time.

Mr. Martin quoted from page ES-4 of the Community Water Supply Plan Board packet material as follows:

“Reactivation of the pumping station may still be desirable for other reasons including: (1) transmission of storage releases from Lake Albemarle and/or Beaver Creek Reservoir to the Observatory Water Treatment Plant, and (2) if the storage of the Ragged Mountain Reservoirs was increased, it could be used to refill the reservoirs following a drought event.”

Mr. Martin stated that the benefit of the Mechums River Pump Station is that it would allow for increased minimum instream flow in the Moormans River by reducing system reliance on the Moormans River and supplementing water in the system from the Mechums River. He further stated that the appreciation of this benefit did not appear to be present in the Community Water Supply material.

Mr. Martin also commented that he did not understand why the consultants were recommending that the valve replacement at the Sugar Hollow Dam be put on hold. He stated that the valve was installed in 1925 and required manual adjustments, which are time consuming and potentially dangerous. Mr. Martin further stated that the concept was to install a modern, possibly remote-activated, electric valve to better manage discharges from the Sugar Hollow Reservoir. He added that without such a valve, it is difficult to prevent waste of the Sugar Hollow Reservoir and Moormans River water.

Mr. Martin stated that although there might be some value to the technical changes being outlined in this report by Gannett Fleming, he hoped everything accomplished for the benefit of the Watershed in the last several years would not be lost in the process. He further submitted as a citizen that our elected public officials are players, and they, along with citizens, need to be kept informed of the status of the Community Water Supply Plan. He noted that Mr. Gaffney was on the agenda for the Board of Supervisors meeting of February 4, 2004, and he hoped that these issues could be further clarified at that time.

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4.0 Consent Agenda

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

- 4a) Staff Report on Finance
- 4b) Staff Report on Operations
- 4c) Staff Report on On-going Projects

In regards to **Item 4a), Staff Report on Finance**, Mr. Tucker noted that under the Wastewater Rate Centers, the summary indicated that urban wastewater treated to date was at 11.64 mgd, which was significantly higher than the five-year average. He asked if this increase was due to infiltration and inflow. Mr. Wood stated that increased rainfall had impacted wastewater flows.

Upon a motion by Mr. Tucker, and seconded by Mrs. Mueller, the Board of Directors by a 5 – 0 vote approved Items 4a), b), and c) of the Consent Agenda.

5.0 Other Business

In regards to **Item 5a), Citizens Advisory Committee Report – Role and Membership Vacancies**, Mr. Wood stated that the former Chair of the Committee had requested that this report be placed on today's agenda. He noted that no Citizen Advisory Committee members were present today to give this report, and the Board agreed to defer this item until the February 23, 2004 meeting.

Mr. Brent inquired if RWSA had received any response from its advertisements for new Citizens Advisory Committee members. Mr. Wood stated that RWSA had received two applications and copies would be sent to the Board.

In regards to **Item 5b), Community Water Supply Plan Update – Discussion and Presentation**, Ms. Whitaker stated that she appreciated the opportunity to provide the Board with an update on the Community Water Supply Plan. She then reintroduced the following team members from Gannett Fleming who were attending today's meeting: Mr. Aaron Keno – Project Principal, and Tom Pursel – Project Manager. She also stated that Mr. Bill Ellis, Community Water Supply Attorney, was also in attendance.

Ms. Whitaker reported that in September 2003, the Board approved the Scope of Work for Gannett Fleming to proceed with the Community Water Supply Plan. She stated that at a kick-off meeting held the end of October 2003, a project schedule was released to the Board and the public. She further stated that the Project Team would be providing details today on two key reports completed since October.

Ms. Whitaker next provided a quick synopsis of the work completed to date by the Project Team on six key tasks:

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Task 1 – Water Supply Permitting

- Wetlands - Agreement was reached with the Army Corps of Engineers on how delineations would be conducted. Fieldwork has begun with 33 percent of the wetlands having been flagged on the South Fork Rivanna Reservoir and another 51 percent inspected and hand mapped.
- Cultural Resources Survey - GPS coordinates have been taken, and all sites are in the process of being mapped. Some of the sites have been identified as being in the normal pool of inundation area, and there are expectations that a Stage 2 study might not have to be completed on every previously identified site.
- James Spiny mussel – The Project Team attended a meeting in December and engaged in dialog with other interested agencies in this area. The Spiny mussel Survey has been scheduled for April 2004, which will cover approximately two river miles upstream.
- Raw Water Model and Safe Yield Study – Has been completed and additional copies will be sent via FedEx and provided to the Board. The Executive Summary is included in the Board packet. The Project Team will discuss the report's implications in further detail today.

Task 2 – Mechums River Pump Station

- This project would be reviewed in relation to the Safe Yield Study and Raw Water Model. The design of the fish ladder will be coordinated with the Virginia Game and Inland Fisheries. Modifications to the initial design are needed due to damage from Hurricane Isabel.

Task 3 – South Fork Rivanna Reservoir Pilot Dredging Project

- Project Team will explain in further detail the draft dredging report that was included in the Board packet. A review has been made on all the work completed to date, including the Panorama Farm site.

Task 4 – Observatory Water Treatment Plant and Pumping Station

- An exhaustive review has been made, and the Project Team expects that the entire facility evaluation would be completed by the Spring of 2004.

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Task 5 – South Fork Rivanna Reservoir Dam Modifications

- Extensive research has been done in relation to the existing conditions of the dam. The actual design of the four-foot bladder had been put on hold until the alternative re-evaluations have been completed.

Task 6 – North Fork Pumping Station Improvements

- The study on the intake and intake pumping has been completed, and the results are currently under review.

Ms. Whitaker asked Mr. Tom Pursel to come forward at this time to discuss the Safe Yield Modeling and the updated dredging letter report for the South Fork Rivanna Reservoir.

Mr. Tom Pursel commented that he would be reporting first on the South Fork Rivanna Reservoir dredging project. He stated that the Project Team reviewed past work on this project and compiled a “white paper” providing commentary on anticipated success. He reported that it is their belief that a pilot dredging program would not be cost effective in the long term, as the amount of sediment to be removed would only increase safe yield for a two-year period before the sedimentation process overtakes the storage gained through this strategy.

Mr. Pursel reported that the Project Team is recommending that other alternatives be considered before undertaking a dredging project. He further stated that sedimentation levels could be monitored at a lower cost in the interim. He added that most reservoirs eventually stabilize, and it is believed that the South Fork Rivanna Reservoir would reach that point in the sedimentation process.

In response to a question from Mr. Gaffney, Mr. Pursel stated that a 20-year dredging program would cost about \$42 million.

Mr. Pursel next reported on the Raw Water Modeling and Safe Yield Studies. He stated that safe yield was compared to the critical elements of water release from the South Fork Rivanna Reservoir, the four-foot crest controls option, and historic rainfall and inflow rates for the period of record from 1925 to 2002. He commented that two significant droughts affected the reservoir system during that time period. Mr. Pursel further stated that preliminary evaluations were also conducted to determine how permitting would affect safe yield. He added that a chart was developed from this data, which was included in the Board packet. He then proceeded to describe two scenarios that were depicted on the chart for further clarification. Mr. Pursel noted that regardless of which scenario is chosen, by 2030 the system could possibly be facing a deficit situation due to projected demand. He stated

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that reviewing other alternatives did not necessarily mean abandonment of the entire plan but could prove valuable in evaluating future needs.

Mr. Gaffney inquired if the “No release Requirement” is the Project Team’s understanding of the Authority’s current mandate concerning South Fork Rivanna Reservoir releases. Mr. Pursel replied in the affirmative and added that the other release scenarios depict the impact on safe yield when undertaking a project requiring a permit. He further stated that release is very important to the safe yield and the future sustainability of the South Fork Rivanna Reservoir.

Mr. Tucker asked if there were any statutory requirements concerning COE (Army Corps of Engineers) releases. Mr. Keno responded that there is no specific law that states minimum releases are required. He further stated that if a federal or state permit is needed, the agencies are entitled to consider the environmental effects of the project to ascertain the conditions that might need to be applied in order to maintain adequate habitat for sufficient wildlife. Ms. Whitaker added that the 8 mgd figure was an assumed release when the study began, and upon conducting additional research, it was determined that in fact there is not currently a mandated 8 mgd release. She also stated that additional discussions with the regulators on the effects of an 8 mgd or inflow release resulted in the development of this chart in order to provide a basis for comparison on what the expected safe yield would be under the three scenarios.

Mr. Gaffney asked if the Project Team would be able provide by the next Board meeting the approximate amount of water that was released by RWSA during the drought. Ms. Whitaker stated that the Project Team has been attempting to gather information on how RWSA operated during the 2002 drought. She commented that it was her understanding that the Authority operated closer to the 16 mgd number, but the exact numbers have not been calculated at this time.

Mr. Aaron Keno reiterated that the release would be available except during extreme drought situations. He stated that the Project Team analyzed the droughts of 1930 and 2003. He further stated that in severe drought conditions, a natural situation occurred whereby a stream experienced no flow for an extended period of time. He commented that this issue has been addressed in more detail in their report.

Mr. Brent inquired if there were an accepted means to predict when sedimentation stabilization would occur in the reservoir, and if so, is the data available to make that determination. Mr. Pursel stated that the technology has not been fully developed at this time. He added that sedimentation decline in a reservoir appears to be linear over time and expectations are that it would flatten at some point. Mr. Brent also commented that it is the community’s perception that the reservoir could eventually become an unsightly marsh filled with cattails, and he felt that this information could assist in determining whether to

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proceed with the dredging project. Mr. Keno commented that in their preliminary examination of the issue, it was determined that sedimentation was occurring at the “head” of the reservoir and the expectation is that it would continue in that manner. He also stated that even if sediment continues to accumulate, it is unlikely that the reservoir would fill to the point of becoming a quagmire. Mr. Keno reported that it is their recommendation to move forward with reformulating the alternatives while continuing to monitor the sedimentation situation. He added that, at this time, the Project Team is not recommending that detailed modeling be conducted on sedimentation patterns.

In response to a question from Mr. Gaffney, Mr. Pursel stated that the \$1.8 million for dredging includes the low cost disposal option of using Panorama Farms. Mr. Keno added that as outlined in their report, the Pilot Dredging project is estimated to cost between \$1.8 million to \$2.8 million and would add 60 million gallons of storage. Ms. Whitaker commented that over a 20-year program, the amount of sedimentation to be removed equates to a depth of 9 feet over 200 acres of land. She also stated that the land use contract with Panorama Farms has a finite life and is contingent on factors which could potentially increase the sedimentation removal costs in the future.

Mr. O’Connell stated that the analogy had been previously used which compared the reservoir to a bathtub with sediment slowly coming in, and he asked for clarification on why the reservoir would not completely fill up with sediment. Mr. Pursel used the bathtub analogy and explained that the bottom of the bathtub is flat while the reservoir bottom is sloped toward the dam. He further stated that as the sediment enters the upper end of the reservoir, it experiences a decrease in velocity due to the water volume and the sediment is then deposited at that location. Mr. Keno added that as the reservoir loses volume due to sediment accumulation, the velocity increases and sedimentation decreases whereby a balance is achieved.

Mr. Stephen Bowler further clarified that the reservoir is partly like a bathtub and partly like a river. He further stated that as the bathtub fills up with sediment, it becomes more like a river with the ability to import and export sediment more efficiently and less sedimentation is deposited onto the bottom of the bathtub.

There was further discussion on the merits of conducting sediment modeling. Ms. Mueller asked if Bathymetric survey work could furnish the Project Team with the data needed on sedimentation rates. Mr. Pursel stated that is the best technique available at this time, as the other approach is based on theoretical modeling. Mrs. Mueller suggested, and the Project Team was in agreement, that the Bathymetric survey would be performed first, and if additional data was needed later in the project, sediment modeling could be considered at that time.

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Mr. Aaron Keno next distributed revised schedules, which were not included in the Board packet. Mr. Keno thanked the Board for the opportunity to present their findings and to answer any questions. He reported that the conclusion reached in the two reports that were reviewed by Mr. Pursel is the need to reformulate the alternatives. He clarified that “reformulate” means to build on the current alternatives so that the projects can be justified during the permitting process. He further stated that this is a natural process of moving forward with the latest information since the initial development of the Community Water Supply Plan.

Mr. Keno also reported that at RWSA’s request, a Scope of Services and fee estimate for that work was prepared and included in the Board packet. He stated that the work had been broken down into three phases:

- Phase I – Determination on what alternatives need to be reformulated.
- Phase II – Evaluation of those alternatives as to the requirements needed to move forward with the permitting process.
- Phase III – Actual implementation of the permitting process.

Mr. Keno pointed out that the red bar on the revised schedule indicated the four and a half months necessary to complete the first two phases. He stated that the third phase would continue at that point. He also noted that the overall schedule has been modified to reflect the impact of the first two phases. Mr. Keno commented that not all of the projects would be delayed during that time frame. He added that the schedule would be a living document, which would be continually updated and provided on a monthly basis to RWSA staff.

Mr. Brent stated that in the Scope of Work there are several references to Lake Albemarle as being an available water resource. He further stated that during the 2002 drought, an offer was made for the emergency use of the water, but he did not believe that it was a standing offer. He suggested that the State be contacted as to the availability of Lake Albemarle as a potential water source before a lot of time and money is spent exploring this option.

Mr. Bowler informed the Board that during the regulatory meeting when the initial request was made for the emergency access, the State offered to consider selling Lake Albemarle to RWSA as another long-term possibility.

Mr. Keno stated that as part of their work, they would investigate the availability of all potential water sources.

Mr. Tucker asked if the proposed improvements to the Ragged Mountain Dam tie into the issue Mr. Martin raised concerning the need for the Mechums River Pump Station.

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Mr. Keno stated that Mr. Martin raised some very good points and that much of today's presentation has focused on safe yield. He further stated that this issue would be considered when the alternatives are reformulated.

Mr. Gaffney stated that the proposed four-foot crest controls are projected to add only 2.9 million gallons of water per day. He asked if the Project Team was considering eight-foot crest controls. Mr. Keno stated that all of the alternatives would be reevaluated, and those that had been impacted by the changed conditions would be reformulated. He added that the eight-foot crest was an option that would be considered along with other feasible alternatives. He explained that in the Scope of Services, a water supply deficit approach is taken in evaluating alternatives.

Mr. Gaffney asked if the changes in conditions from the original Community Water Supply Plan to the present were a result of the 2002 Drought and the current regulatory requirements. Mr. Keno replied in the affirmative and added that another important factor was the result of the safe yield analysis. Mr. Gaffney noted that since the 2030 and 2050 demands were based on data obtained from a 1997 study, he requested that the demand projections be revised and incorporated into the Scope of Services for consideration during the re-evaluation process. The Project Team expressed agreement with this request.

Mr. Brent moved, which was seconded by Mr. Tucker, that the Board of Directors authorize RWSA staff to proceed with Phase I and Phase II of the proposed Gannett Fleming Scope of Services, dated January 19, 2004, for the on-going work on the Community Water Supply Capital Program, for the amount estimated to total \$288,000 for both phases.

In the discussion following the motion, Mr. O'Connell commented that he had a recent conversation with the County Administrator from Fluvanna who stated that the County would be moving forward on the joint venture with the Louisa Water Authority to pump water from the James River. He also stated that the County Administrator indicated that federal money might be available for this project. Mr. O'Connell recommended that RWSA staff investigate this option further and bring back a recommendation to the Board on whether they felt this joint venture would be of any benefit in the long term and whether it should be included in the Scope of Services for the Community Water Supply Plan. Mr. Brent and Mr. Tucker expressed their agreement with Mr. O'Connell's recommendation. Mr. O'Connell then asked for input from the Gannett Fleming Project Team.

Mr. Keno stated that he thought Mr. O'Connell brought up an excellent point. He further stated that a comprehensive approach in the examination of all the reasonable alternatives would be of benefit during the permitting process. He added that this is the type of issue that would be identified and documented during Phase I of their work.

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By a 5 – 0 vote, the motion to proceed with Phase I and Phase II of the proposed Gannett Fleming Scope of Services for \$288,000 was approved.

6.0 Other Items From Board/Staff Not On Agenda

Mr. John Martin asked if he could make additional comments concerning the issue of minimum instream flow at this time, and the Board was in agreement.

Mr. Martin stated that it was his understanding that the 8 mgd release from the Rivanna River resulted from the process when the hydro plant was built and an exception was allowed in the permitting requirements issued by the Federal Regulatory Energy Commission (FERC). He further stated that even though there might be no legal requirement for the 8 mgd release, this is what the community promised FERC that it would do when the exemption was issued. Mr. Martin commented that it was also his understanding that representation was made that RWSA would seek to transfer that 8 mgd release into a requirement at certification. He added that an application for a 401D certification was never filed, and this was never followed up by FERC.

Mr. Martin reiterated that even if there is no legal requirement for minimum instream flow, there is an expectation by the community that this would be the result of this project. He requested that the Board convey to Gannett Fleming today its desire that minimum instream flow for all the rivers and streams be taken into consideration when developing the Community Water Supply alternatives. Mr. Martin commented that basing planning on the assumption that there would be no release and no minimum instream flow in the Rivanna is unacceptable.

Mr. Gaffney thanked Mr. Martin for his comments.

7.0 Meeting Recess

Mr. Brent moved, which was seconded by Mrs. Mueller, that the Rivanna Water & Sewer Authority Board of Directors meeting be recessed at this time and be reconvened at the conclusion of the Rivanna Solid Waste Authority Board of Directors meeting to enter into a joint closed meeting with the Rivanna Solid Waste Authority Board of Directors to discuss the Executive Director selection process. By a 5 – 0 vote, the motion was approved and the meeting was recessed at 3:13 p.m.

8.0 Resumption of Open Meeting

The RWSA Board of Directors meeting was reconvened at 3:20 p.m.

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9.0 Closed Meeting

Upon a motion by Mr. Tucker, and seconded by Mrs. Mueller, the Rivanna Water & Sewer Authority Board of Directors voted to enter into a joint closed meeting with the Rivanna Solid Waste Authority Board of Directors for matters pertaining to personnel issues as permitted under Section 2.2-3711.A.1 of the Code of Virginia to discuss the Executive Director selection process. By a 5 – 0 vote, the motion was approved.

ATTENDEES: Mr. Brent, Mr. Gaffney, Mrs. Mueller, Mr. O’Connell, Mr. Tucker, Mr. Graham (RWSA Board of Directors), Mr. Krueger, Mr. Wood., and Mr. Robert Slavin (Consultant -via conference call).

10.0 Resumption of Open Meeting

The Rivanna Water & Sewer Authority Board of Directors meeting reconvened at 4:03 p.m.

Mr. O’Connell made the following motion, which was seconded by Mrs. Mueller:

“**WHEREAS**, the Rivanna Water & Sewer Authority Board of Directors has convened a joint closed meeting with the Rivanna Solid Waste Authority Board of Directors on this date pursuant to an affirmative recorded vote and in accordance with the provisions of the Virginia Freedom of Information Act; and,

WHEREAS, Section 2.2-3712.D of the Code of Virginia requires a certification by the Rivanna Water & Sewer Authority Board of Directors that such closed meeting was conducted in conformity with Virginia law;

NOW, THEREFORE, BE IT RESOLVED that the Rivanna Water & Sewer Authority Board of Directors certifies that, to the best of each member’s knowledge, (i) only public business matters lawfully exempted from open meeting requirements by Virginia law were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion convening the closed meeting were heard, discussed or considered by the Rivanna Water & Sewer Authority Board of Directors.”

There being no further discussion, Mr. Gaffney, called for a roll call vote:
Mr. Brent – Aye, Mr. Gaffney – Aye, Mrs. Mueller – Aye, Mr. O’Connell – Aye and
Mr. Tucker – Aye.

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11.0 Adjournment

There being no further business, Mrs. Mueller moved the meeting be adjourned, seconded by Mr. Tucker. All members voted aye, and the meeting was adjourned at 4:04 p.m.

Respectfully submitted,

Mr. Robert Tucker
Secretary - Treasurer