

RWSA BOARD OF DIRECTORS
Minutes of Regular Meeting
January 22, 2007

A regular meeting of the Rivanna Water & Sewer Authority (RWSA) Board of Directors was held on Monday, January 22, 2007 at 2:00 p.m., in the Conference Room, Administration Building, 695 Moores Creek Lane, Charlottesville, Virginia.

Board Members Present: Mr. Gary Fern, Mr. Michael Gaffney – Presiding, Mr. Gary O’Connell, and Mr. Robert Tucker.

Board Member Absent: Ms. Judith Mueller.

Authority Staff Present: Ms. Anne Bedarf, Mr. Bruce Edmonds, Mr. Tom Frederick, Ms. Jenny Cole-Johnson, Mr. Chuck Kent, Ms. Mary Knowles, Ms. Andrea Terry, Ms. Jennifer Whitaker, Mr. Norman Wescoat, Dr. Robert Wichser, and Mr. Lonnie Wood.

Also Present: Mr. Kurt Krueger – RWSA Attorney, Mr. Ron Taylor – RWSA Consultant with Hazen and Sawyer, 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 22, 2007 at 2:00 p.m., and he noted that a quorum was present.

2.0 Minutes of Previous Board Meeting

Upon a motion by Mr. Tucker, and seconded by Mr. Fern, the Board of Directors by a 4 – 0 vote approved the minutes of the regular Board meeting held on Monday, December 18, 2006.

3.0 Executive Director’s Report

There was no Executive Director’s Report this month.

4.0 Items from the Public

Mr. John Martin, resident of Free Union, Virginia, stated that he lived on Catterton Road just north of the Buck Mountain land and wanted to comment today on the dedicated service provided by “Mr. Thomas Buckaroo Frederick” to the neighbors on Catterton Road. He felt that the minutes should reflect that Mr. Frederick inspected the Buck Mountain land on horseback recently with Ms. Ginger Ashcom, who indicated to him that the horse provided to Mr. Frederick was a “tame horse.” When Mr. Martin inquired further about the horse a few days later, Ms. Ashcom stated that the horse was usually found in the Durban’s pasture with its teeth resting on top of the fence for hours at a time.

Mr. Gaffney thanked Mr. Martin for his comments.

5.0 Consent Agenda

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

- 5a) Staff Report on Finance
- 5b) Staff Report on Operations
- 5c) Staff Report on On-going Projects

In regards to **Item 5a), Staff Report on Finance**, Mr. Fern inquired if the November monthly financial summaries were prepared, noting that they were not available last month due to the earlier December meeting date. Mr. Wood stated that the summaries were prepared and incorporated into this month's report, which included year-to-date figures through December 2006. Mr. Wood will provide the November summaries to Mr. Fern.

Mr. Tucker moved, which was seconded by Mr. O'Connell, that the Board of Directors vote to approve **Items 5a), b), and c)** of the Consent Agenda. The motion was approved by a 4 – 0 vote.

6.0 Other Business

In regards to **Item 6a), Moores Creek WWTP Enhanced Nutrient Upgrade Preliminary Engineering Report**, Mr. Frederick stated that this Board report provided a brief summary on a number of items associated with the actions taken by the State Water Control Board (SWCB) a little over a year ago to reduce the concentration of nitrogen and phosphorus in the rivers of Virginia in support of the rivers themselves as well as the Chesapeake Bay. RWSA, with its consultant, has identified the upgrades that would be needed to the Moores Creek WWTP in order to meet the facility's portion of that allocation. Mr. Ron Taylor with Hazen and Sawyer was in attendance today to present their findings and recommendations, as well as the costs associated with this project. RWSA was requesting today that the Board authorize the Executive Director to submit a Preliminary Engineering Report to DEQ that summarizes those findings and also authorize RWSA to begin soliciting engineering consultants for a design of the recommended Moores Creek WWTP improvements that would commence once DEQ has approved the report. RWSA was hopeful that DEQ approval of the Preliminary Engineering Report and completion of a Water Quality Improvement Fund (WQIF) grant would occur by early spring so that the grant performance requirements and design services could be presented at that time for Board approval. Mr. Frederick then recognized Mr. Taylor who would present the contents of the Preliminary Engineering Report.

Mr. Taylor stated that Hazen and Sawyer was in the process of completing the Preliminary Engineering Report for the Moores Creek WWTP regarding facility upgrades that would be needed to meet the new requirements for enhanced nutrient removal. In reviewing population growth projections and related flow projections, Hazen and Sawyer found that the facility's current capacity of 15 million gallons per day (mgd) should be adequate until approximately 2016. Hazen and Sawyer learned from a special sampling that was taken at the beginning of the study along with a review of the historical data collected at the Moores Creek WWTP that the carbon found in the plant's influent is relatively low compared to the other wastewater

constituents. The resulting low carbon to nitrogen ratio as well as a low carbon to phosphorus ratio meant that this facility would have more difficulty achieving enhanced nutrient removal biologically as compared to typical wastewater treatment plants. Due to those findings, Hazen and Sawyer was concerned about the ability of the Moores Creek WWTP to handle the variations in flow and loads coming into the facility and the operation's capability to use the tools that a design would provide in order to meet the new nutrient and phosphorus limits over a variety of conditions.

Mr. Taylor further reported that the capital improvements necessary at 15 mgd for enhanced nutrient removal at this facility were very significant. Hazen and Sawyer evaluated various different biological nutrient removal processes at different configurations and sought to optimize their recommendations in order to minimize operating and capital costs. They found that 2-stage and 3-stage biological processes, which were considered adequate for meeting the required levels of treatment for typical plants like the Moores Creek WWTP, would not be adequate specifically at Moores Creek WWTP because of the low carbon ratio. For those reasons, Hazen and Sawyer recommends that the existing treatment process be converted to a 5-stage enhanced nutrient removal process. A 5-stage process would involve anaerobic treatment for organic phosphorus removal, which would be followed by a series of two 2-stage denitrification and nitrification processes that would entail the addition of supplemental carbon. The project would involve converting the four existing aeration basins to this 5-stage configuration as well as constructing a fifth aeration basin with the same 5-stage process. Chemical storage would be needed at these facilities for supplemental carbon addition as well as chemicals for phosphorus removal and adjustment for alkalinity. Other improvements being recommended by Hazen and Sawyer included an additional secondary clarifier to ensure reliable performance and the installation of new tertiary filtration facilities. Additional dewatering facilities were also being recommended to provide reliable solids handling for the facility. Mr. Taylor noted that much of the existing infrastructure at the facility is over 25 years old and is approaching the end of its useful life. Hazen and Sawyer would recommend as part of this project the upgrade or replacement of several process and equipment items.

Mr. Taylor also stated that as outlined in the Board report, the total project cost was approaching \$35 million. There were a number of line items listed on page 3 of the Hazen and Sawyer Report that he was prepared to discuss in further detail if requested by the Board. As this concluded his report, Mr. Taylor stated that he would entertain any questions that the Board had concerning the Hazen and Sawyer findings and recommendations presented today.

Mr. Tucker inquired about the WQIF grant funding process and the amount of funding anticipated for this project. Mr. Frederick stated that RWSA has learned from DEQ that grant funding would be based on sewer charges billed to urban citizens based on per capita income. This service area would receive a grant of 60 percent of the items that DEQ determines are directly attributable to nutrient treatment. The next step in the negotiation process with the Commonwealth is an understanding of what items in the project are eligible for grant funding, which has not been determined at this time.

Mr. Gaffney next asked if the \$35 million figure was based on the existing capacity of the Moores Creek WWTP and not the future expansion of the facility. Mr. Taylor stated that the

\$35 million reflected the amount needed to meet the new nutrient wasteload allocations. The 15 mgd of liquid treatment capacity is forecasted to be adequate until about 2016, when expansion would be needed to meet the area's future needs. Mr. Gaffney also questioned whether expansion of the facility would incur additional costs. Mr. Taylor replied that Hazen and Sawyer did evaluate the costs associated with an expansion to 20 mgd and found that the expansion project would add another \$24 million to the \$35 million figure based on today's dollars. Mr. Frederick added that he felt part of Mr. Gaffney's question concerned whether the \$35 million project was compatible with future expansion plans. Mr. Frederick also stated that RWSA was not proposing at this time to build facilities solely for expansion purposes, but the proposed improvements to the Moores Creek WWTP would be compatible with future expansion. Mr. Gaffney then asked whether the project cost in incremental dollars would be the same for proposing the project with a completion date of 2011 as undertaking the expansion project with a completion date of 2016. Mr. Taylor responded in the affirmative.

Mr. O'Connell inquired if the addition of a secondary clarifier was being proposed in order to meet the new regulatory requirements concerning enhanced nutrient removal and not related to future expansion of the facility. Mr. Taylor stated the additional secondary clarifier would be a parallel unit to the two clarifiers that the facility currently operates and would not add any capacity to the current 15 mgd. The existing two clarifiers did not provide adequate treatment to meet the more stringent limits.

Mr. Gaffney then asked about the amount of time it would take to complete the enhanced nutrient upgrades and also the time frame for completing the expansion of the facility to 20 mgd.

Mr. Taylor stated that with a project of this magnitude, he would estimate the duration of the enhanced nutrient upgrade project from the beginning of the design work to completion of construction to be approximately four years. The expansion project would be similar in size and duration. Mr. Gaffney then commented that design and construction work could conceivably be ongoing at the Moores Creek WWTP from 2007 through 2016 if both projects were undertaken in a consecutive manner. Mr. Frederick clarified that based on growth projections provided by the City and the County, 2016 was the "trigger" date when DEQ would require RWSA to begin to develop a plan to expand its facilities and not the date when the expansion project would need to be completed. Based on current forecasting, the planning and design of a plant expansion would begin about 2016, with construction in succeeding years, so there would be about a four-to five-year time frame between the two projects when construction activity would not occur. Mr. Frederick further clarified that the capital budget approved last year included a small number of modest projects that had been identified by staff as necessary to address infrastructure needs whether or not an enhanced nutrient upgrade project was undertaken. These projects have now been combined into this project and were included in these cost estimates. Mr. Frederick added that RWSA was being very careful about estimating a time period for completion of this project until more data was available. He further stated that Mr. Taylor had offered his opinion of "four years" concerning the duration of the project based on a "best case scenario," where there were sufficient contractors and engineers to perform the required work in a timely manner. Virginia was moving forward with a very ambitious and unprecedented public works upgrade initiative that involved 90 plus wastewater treatment plants striving to meet the same deadline. Many people have expressed concerns about whether there were enough resources in terms of equipment manufacturers, contractors, sub-contractors, quality control specialists, and engineers,

to accomplish what was being requested by the state. There were some numbers that suggested wastewater plants in Virginia were being upgraded at much higher construction costs than what was estimated for the projects. RWSA was proposing that by requesting the Board's approval for submitting the Preliminary Engineering Report at this time, while simultaneously moving the grant negotiation process forward and soliciting the engineer for the design work, RWSA would be demonstrating its willingness to move the project forward as quickly as is reasonably possible. At the same time there were many schedule uncertainties that would need to be addressed in the future, and he felt that RWSA is not yet in a position to make a commitment on the completion date for this project.

Mr. Gaffney then inquired if RWSA had considered the uncertainties of state funding. Mr. Frederick stated that available funding would depend upon action taken by the State Legislature. Under DEQ's internal rules and regulations, DEQ will offer a grant agreement to any wastewater treatment plant that submits a Preliminary Engineering Report. Each agreement would be conditioned upon future appropriations by the Virginia Legislature. Mr. Frederick felt that lobbying efforts should continue to encourage the state to meet its publicly-stated obligation to provide some funding in support of its decision that it would be more expeditious to address the nutrient issue through wastewater treatment plants first, even though 60 to 65 percent of the nutrients in the rivers in the Commonwealth of Virginia are from non-point sources.

Mr. Fern next questioned how much of the \$35 million would be spent on enhanced nutrient removal and how much for upgrades to the facility's infrastructure. Mr. Taylor stated that in his opinion about \$30 million could be argued as being related to nutrient treatment.

Mr. O'Connell inquired if there were any other funding sources for this project in addition to the \$250 million being recommended by Governor Kaine. Mr. Gaffney commented that he felt that the \$250 million being proposed during the 2007 legislative session was in addition to the \$250 million already in the WQIF. Mr. Frederick commented that there would be approximately \$500 million in the WQIF if the additional funding request was approved, which would still not be nearly enough to fund the upgrades for all 90 plus wastewater treatment plants throughout the state, now estimated at over \$2 billion. The Moores Creek WWTP would be competing for WQIF funding with some of the larger facilities in Virginia that will spend over \$100 million per facility to meet the same regulation.

Mr. Gaffney then questioned if the \$35 million would only allow the Moores Creek WWTP to meet the new limits but not perform additional upgrades that would enable the facility to sell credits. Mr. Frederick explained that after the Preliminary Engineering Report is submitted to DEQ, negotiations will begin between RWSA and the state concerning the items that will be eligible for grant funding. Once this process has been completed, the Authority will receive from DEQ the authorized grant amount and the performance requirements for the Moores Creek WWTP. The performance requirements of the grant are based on the technology installed, which could differ from the wasteload allocation figure. If the performance requirements were to be more stringent than what this facility would need to meet for the wasteload allocation, RWSA would then be in a position to sell credits on the balance. The Authority was not requesting a decision today on the issue of whether or not to sell credits. The first step would be to learn what

the state's performance requirements would be for the Moores Creek WWTP and then present that information to the Board for a decision on the issue of credits.

As there were no further questions or discussion, Mr. Fern moved, which was seconded by Mr. O'Connell, that the Board of Directors vote to authorize the Executive Director to submit a Preliminary Engineering Report for a Moores Creek WWTP nutrient upgrade to the Virginia Department of Environmental Quality, and also authorize the Executive Director to initiate a competitive procurement process for selecting an engineering firm for the design of the Moores Creek WWTP improvements recommended by Hazen and Sawyer. The motion was approved by a 4 – 0 vote.

Mr. O'Connell asked Mr. Fern if it would be useful to have a common notice that could be sent via the City and County utility bills to make their customers aware of this major project and the impact to future utility bills. Mr. Fern agreed to meet with Ms. Mueller about developing this message, and Mr. Frederick offered RWSA staff assistance with this joint undertaking.

Mr. Tucker inquired if RWSA had sent any correspondence to this area's state legislators in support of the additional \$250 million proposed by Governor Kaine for the WQIF.

Mr. Frederick stated that RWSA had sent letters to the legislators previously in support of additional state funding for wastewater treatment plant upgrades but not as yet for this specific proposal. Mr. Tucker suggested that RWSA draft a letter in support of Governor Kaine's proposal that would be signed by the Chairman of each of the local boards to demonstrate the community's support for the additional state funding. Mr. Gaffney also suggested that a press release be sent out in coordination with the utility bill inserts.

In regards to **Item 6b), Design Services – Meadowcreek Sanitary Sewer Interceptor Upgrade, Preliminary Engineering**, Mr. Frederick stated that over the past few years RWSA has taken a posture toward understanding the capacity of its sewer transmission systems and future capital needs where the Authority jointly serves the ACSA and the City of Charlottesville. The Comprehensive Sanitary Sewer Interceptor Study began with Board approval of the Five-Year Capital Improvement Plan (CIP) budget in 2005. An engineer was selected in late 2005, and a significant amount of flow monitoring has been conducted since that time. The flow monitoring process involved the placement of meters in sewer pipes at different prescribed locations to measure the flow on a 24-hour-a-day basis for a number of months to capture seasonal variations, daily variations, and variations during both dry weather and wet weather events. After collecting a good sampling of that data through November 2006, RWSA engineers have recently focused on comparing actual flow with pipeline capacities. The consultants have identified sections of the Meadowcreek Interceptor that could provide little if any additional capacity during peak service conditions. RWSA had anticipated some improvements to its sewer collection system in the CIP and had budgeted to perform some of that work during FY 08. Based on the consultant's most recent finding, RWSA was requesting that the Board approve the advancement of the project to upgrade the Meadowcreek Sanitary Sewer Interceptor to the current fiscal year and also authorize the Executive Director to execute an amendment to the Engineering Services Agreement with Greeley & Hansen, in the amount of \$113,700 plus a 10 percent contingency if necessary, to conduct an alternative analysis study associated with increasing the capacity of the Meadowcreek Interceptor.

Mr. Tucker moved, which was seconded by Mr. O'Connell, that the Board of Directors authorize the Executive Director to execute an amendment to the January 19, 2006 Engineering Services Agreement with Greeley and Hansen for Preliminary Engineering Services to advance the work on a project to upgrade the Meadowcreek Sanitary Sewer Interceptor in the amount of \$113,700, with discretion to execute amendments in an amount up to 10 percent of the contract amount, with funds included in the approved Five-Year Capital Improvement Fund budget for FY 08.

Prior to the vote, Mr. Fern asked Mr. Frederick to explain the scope of services that would be provided for the \$113,700. Mr. Frederick stated that RWSA has outlined some concepts on the best ways to upgrade and expand the capacity of these systems. To ensure that the project is both efficient and effective, Greeley and Hansen will perform on-site evaluations, collect data, examine ways to minimize environmental and property impacts, prepare reports, and hold meetings with federal and state regulatory agencies.

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

In regards to **Item 6c), Upgrade of Water Treatment Plant Lagoons (Crozet and Scottsville)**, Mr. Frederick recognized Ms. Jennifer Whitaker, RWSA Chief Engineer, who would present this report.

Ms. Whitaker reported that RWSA recently received one bid to upgrade four different earthen lagoons at the Scottsville and Crozet Water Treatment Plants from Hammond Mitchell, Inc. in the amount of \$498,500 for both facilities, which exceeded the amount approved in the CIP. Over the last week, the project manager for RWSA has done a "yeoman's job" in negotiating with Hammond-Mitchell, Inc. a \$91,000 reduction in the project cost without a significant cut in the scope of the project. For the Crozet Water Treatment Plant, the combined costs for engineering design, lagoon cleaning, and a 10 percent construction contingency would be about \$6,500 under the approved capital budget. The combined costs for engineering design, lagoon cleaning, and a 10 percent construction contingency at the Scottsville Water Treatment Plant would be about \$14,000 over the capital budget. Although the Board was being requested to approve this bid award with the 10 percent construction contingency, it was RWSA's intention to complete the entire capital project within budget if possible.

Ms. Whitaker next stated that the Board action being recommended today was not included in the written report as discussions with Hammond Mitchell, Inc. were still underway concerning the project costs and scope of work at the time the Board packets were prepared. RWSA was requesting that the Board authorize the Executive Director to execute a construction contract with Hammond Mitchell, Inc. in the amount of \$407,103.50 and also authorize the Executive Director to execute change orders as needed up to 10 percent of the contract amount.

Mr. Tucker moved, which was seconded by Mr. Fern, that the Board of Directors vote to authorize the Executive Director to execute a construction contract with Hammond Mitchell, Inc. for the upgrade of the Crozet Water Treatment Plant and Scottsville Water Treatment Plant lagoons in the amount of \$407,103.50, and also authorize the Executive Director to execute change orders as needed up to 10 percent of the contract amount.

Prior to the vote, Mr. Gaffney stated that it appeared the capital budget for these two projects, including engineering costs, totaled \$518,000 and inquired if that figure was correct.

Ms. Whitaker responded in the affirmative and stated that the costs associated with construction, the 10 percent contingency, engineering, and cleaning would bring the total project cost close to the \$518,000 figure. She reiterated that it was RWSA's intention to keep the total project cost below the approved capital budget if possible. Mr. Gaffney next asked if based on the figures presented today for both projects, the difference between the capital budget and the revised bid was \$7,500. Ms. Whitaker replied that the \$7,500 figure was correct.

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

Mr. Frederick noted that Ms. Michelle Simpson was the project manager referenced by Ms. Whitaker during her presentation to the Board, and he wanted to take this opportunity to publicly praise her work on this project. He understood that RWSA's consultant was involved at the start of the negotiations concerning project costs and scope of work. When those discussions were unable to achieve the desired concessions, Ms. Simpson "took the ball into her own court" by meeting with the contractor, visiting each of the sites, refining the details, and achieving an acceptable "bid package" that was presented today. He wholly concurred with Ms. Whitaker's statement that it was a "yeoman effort" and requested that it be noted in the minutes that Ms. Simpson's extra effort was appreciated by RWSA staff.

7.0 Other Items from Board/Staff not on Agenda

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

8.0 Closed Meeting

There was no need for a closed meeting.

9.0 Adjournment

There being no further business, Mr. Fern moved the meeting be adjourned, seconded by Mr. O'Connell. All members voted aye, and the meeting was adjourned at 2:36 p.m.

Respectfully submitted,

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