Rivanna Water & Sewer Authority
Rivanna Solid Waste Authority
695 Moores Creek Lane
Charlottesville, Virginia 22902-9016
434.977.2970 • 434.293.8858 Fax
www.rivanna.org

MEMORANDUM

TO: **THE HONORABLE ALBEMARLE COUNTY BOARD OF SUPERVISORS**
THE HONORABLE MAYOR AND CITY COUNCIL

FROM: **LONNIE WOOD, INTERIM EXECUTIVE DIRECTOR**
RIVANNA WATER & SEWER AUTHORITY
RIVANNA SOLID WASTE AUTHORITY

SUBJECT: **QUARTERLY UPDATE**

DATE: **JULY 5, 2016**

This is a written quarterly update to be included with your July meeting material and information packets as needed. I would be happy to be in attendance if desired, otherwise, this report will be used at your discretions. Please let your staff know if you have any follow-up questions and I will be happy to provide additional information:

1. FY 2016-2017 Budget Adopted for both Authorities: Budgets for FY 2017 were passed by the Board of Directors for both Authorities. The budgets and the rates adopted can be found at rivanna.org under http://www.rivanna.org/financials-and-procurement/.

2. Water Treatment Plant Granular Activated Carbon Filtration Improvements: Construction is underway to incorporate advanced carbon filtration technology at RWSA's water treatment plants, supporting an interest developed from within the community. This project will advance drinking water quality provided to our citizens by ACSA and the City, which is already high quality, to a superior level. Completion is anticipated in late 2017. To date, all five sites are mobilized. South Rivanna is working on: reinforced concrete structure placement; permanent lime-feed building foundation; ongoing electrical work; and 90% large diameter, ductile iron pipe has been placed. Observatory is working on: finishing reinforced concrete structure placement; permanent lime-feed building foundation has started; ongoing electrical work; 90% large diameter; and the ductile iron pipe has been placed. North Rivanna is working on: GAC building foundation; and erosion and sediment control is in place. Crozet: Clearwell Expansion is complete and in service. The GAC building is under construction. ACSA fence relocation is complete. Construction work at the Crozet Water Treatment Plant will be in proximity to residential areas, and we will continue our previous and current efforts to work closely with those neighborhoods and keep them informed including two HOA's we have communicated with previously. Scottsville: GAC building has been excavated and concrete pouring has begun; erosion and sediment controls are in place; and storm water management sand filled structure is undergoing excavation.

3. Sugar Hollow Update: At the beginning of this spring, we experienced lower than normal reservoir levels at Sugar Hollow which has prompted Rivanna to collect data from upstream, downstream, and flow meters to determine if there is a possibility we have been overestimating the amount of water we release from Sugar Hollow. To address this concern, as well as balance the objectives set by the permit, Rivanna has reduced the release, which was approved by DEQ. Rivanna has reduced the release to what we believe the current actual inflow into the reservoir is using engineering estimates that better reflect naturally occurring current conditions. These engineering estimates and calculations used to address the significant reduction in reservoir levels at Sugar Hollow were shared with DEQ and support their (DEQ) decision to make a temporary release change. We will continue to monitor this important resource for the community. Currently, no water is being transferred from Sugar Hollow Reservoir to Ragged Mountain Reservoir.

   Rivanna and DEQ are working together to get a better understanding of the various issues at play that cause the reservoir levels to drop so quickly. There have been several meetings in the field to obtain stream flow data. During the next month or two, we will be looking into various possible reasons why the releases in March and April were obviously not accurate compared to what the permit intended. This will include the following:

   - Calibrate the metering device that measures the release from the reservoir when there is no overflow at the dam.
   - Install a meter on the transfer line from Sugar Hollow to Ragged Mountain to get a more accurate accounting of the water usage for that purpose.
   - Determine and verify the seepage factor from the reservoir that is part of the formula used in the permit for the release.
   - Continue to gather more data on inflows. A single data point for this on 4/26 was good data to have, but we feel we need more information and data to determine trends.

4. Reservoir Management Study: At the September 2014 Board meeting, the RWSA Board authorized that a contract for Reservoir Management Services be executed with Dinatale Water Consultants to conduct a study of RWSA's five reservoirs. The scope of work included the following major elements:

   - Review and analysis of existing watershed, reservoir inflow, and reservoir data.
   - Identification of the factors and sources that result in existing or potential water quality concerns related to algal growths or that may interfere with the treatment of raw water at the Authority's water treatment plants.
   - Review and suggest modification to current monitoring plan.
   - Identification of key factors or parameters that are regularly or seasonally carried by streams from the watershed to the reservoirs and contribute to water quality problems related to algal blooms.
   - Development of strategies for management of water quality in the Authority's five drinking water reservoirs.

   RWSA currently employs a comprehensive monitoring program to sample, identify and count algal populations in the reservoirs. By conducting this sampling program with existing staff, we have saved roughly $180,000 on sampling and lab analysis that would have otherwise been

performed by consultants. We have observed and treated algal blooms in our reservoirs when necessary over the last two years. One purpose of this water quality management study was to identify other strategies and methodologies for reducing the occurrence of algal blooms and their impacts in our reservoirs. In May the Board heard a presentation by Alex Horne and Kelly DiNatale about their current findings and approved another year of data collection and analysis to refine the report and present a final version in February 2017. That will include detailed recommendations on monitoring, treatment, and capital projects the board may want to consider in the near future.

5. Schenks Branch Interceptor Replacement: The City's Schenks Greenway public park is presently closed for RWSA to construct a new 30-inch interceptor between Harris Street and the entrance to the McIntire Recycling Center. A fence has been installed to shield the construction zone from surrounding development, and construction is being limited to business hours. The contractor's revised schedule lists a fall completion but is being revised.

   The presence of unsuitable material at the Rt. 250 Interchange connection point, rock within the excavation, adverse weather conditions over the winter months, and general difficulties with deep sewer installation has slowed progress. In order to optimize production within the narrow construction corridor and wet conditions, the Contractor has modified their pipe installation methods. They have also drilled into the rock ahead of their trench in order to make it easier to remove and brought in larger equipment to hammer the rock out. Unfortunately even these measures have not been successful in order to expedite the removal of the rock. Based on the size of the construction corridor, it is not feasible to use a larger rock hammer and they have now begun to investigate other methods which include a large rock saw mounted on the boom of an excavator. Once a revised method has been confirmed, a revised project schedule will be provided. A previous schedule anticipated project completion by mid October 2016 which would place them approximately 5 months behind schedule based on current contractual completion dates. Sewer pipe and manhole installation work will continue over the next few months to be followed by reconstruction of the Greenway, including a new walking path and landscaped areas.

6. New Rivanna Pump Station: Installation and backfill grouting of the new 60-inch interceptor pipe inside the tunnel is complete. Reinforcing steel, conduit installation, and concrete pours for the walls of the new pump station are ongoing. The ground floor slab shoring over the west pump room has been installed and the concrete floor pour is anticipated mid-month. The contractor has assembled most of the large diameter piping inside the pump station and installed the bridge cranes.

7. Wastewater Plant Odor Control: The bid was awarded to MEB General Contractor's for $9.3 million at the April 26, 2016 Board meeting. A "notice to proceed" will likely be issued on June 27th. Crews will mobilize their equipment and materials beginning early July. Staff has kept in close communication with the local neighborhood and a small kick-off for the project may be forthcoming.

8. Ivy Materials Utilization Center Transfer Station: The agreement between the County and RSWA defining the responsibilities of each party for this project has been approved by the Board of Directors. The engineering firm has been selected, SCS Engineers, at the last Board meeting and a contract has now been executed. The contract is for the permitting, design and construction management for the transfer station using the concepts approved by the County Board of Supervisors. A kick-off meeting with County, Authority and Engineering staff was held on June 15 and was very productive. Ideas were discussed and worked concerning operating the new facility with such details as traffic flow, utilities and water needs, configuration of the "tunnel"

are related equipment needs, leachate treatment and more. Many of the ideas could produce costs savings. The original concept of 11,800 square feet is what is being worked on for the initial site plan review application. The Authority is still on schedule to submit that application to the County in October.

c: RWSA Board of Directors
RSWA Board of Directors