

## MEMORANDUM

**To:** Albemarle County Board of Supervisors  
**From:** Gary O'Connell, Executive Director  
**Date:** March 23, 2018  
**Re:** Albemarle County Service Authority (ACSA) Quarterly Briefing  
**cc:** Mr. Jeff Richardson, County Executive; ACSA Board of Directors;  
ACSA Leadership Team

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We continue to appreciate the opportunity to share what is going on at your water agency, the Albemarle County Service Authority. We pride ourselves on safe, clean, reliable water, and all our employees who work hard every day to keep that trust in our water, and provide good customer service.

- 1. Budget and Rates** – The ACSA's FY 2018 Budget and Rates will be presented to the ACSA Board at their April meeting, for a June adoption. The Capital Improvements Program (CIP) was presented to the ACSA Board at the March meeting, and new projects are listed in the capital projects shown below. A major part of the ACSA budget goes for treatment costs to the Rivanna Water and Sewer Authority (RWSA), with over 60% of the budget/rate paying for that expense. A number of larger water projects are underway including the completion of the advanced water treatment GAC; upgrades at the South Fork and Observatory Plants, Crozet Water System and Plant doubling in capacity, completion of the Wastewater Odor Control Project at the Moore's Creek Plant and other RWSA projects. Most all of these RWSA projects are financed through long-term bonds, and the annual debt service costs are part of the wholesale rate that the RWSA charges ACSA. We are seeing a significant increase in the RWSA Wholesale Rate next year as the funding for many of these capital projects, including Crozet, are beginning to come on-line.
- 2. AMI (Advanced Metering Infrastructure or Electronic Metering)** – One of our strategic plan items is to explore the various AMI technologies that are available in the water metering world. Most electric and gas utilities, and medium/large sized water utilities, have already converted to the AMI technology. This feasibility study will evaluate our technology options and look closely at the needs of our customers. We have received six proposals for the Feasibility Study, and have narrowed to the top proposer and

conducting reference checking, and work on a final scope of services agreement. This will be a 4 to 6 month long feasibility study process, so near the end of 2018 we will be making recommendations to the Board of Directors on the next steps of the project. A tremendous advantage with AMI is immediate leak detection inside the customer's home or business, a tremendous water conservation and cost savings tool.

3. **Rate Study** – We have been updating our rate model through a very detailed review of all ACSA fees and rates, including the 4 tiers of water rates and the developer new connection fees. This tiered rate structure is oriented to the tier 1 residential rate being affordable, which keeps us lower than the statewide average comparable bill for single-family residential customers, and 22% lower than a comparable customer bill from the City. We, as part of our strategic planning, update the rates each budget cycle and every five years conduct a detailed review of the rate model, which is what we are doing now. The results, upon ACSA Board approval in June, will become part of the FY 2019 Budget and Rates next year. A formal Rate Study report and workshop will be presented and discussed with the ACSA Board at the March-April Board meetings. A summary of the budget and proposed rates will go out to all our customers with their May utility bills.
4. **CMMS – Computerized Maintenance Management System** – This system for work orders and inventory is part of our Strategic Plan to improve how we manage our day to day operations. This is one of those projects that is not so visible, but has the potential to greatly improve our operations to deliver better customer service, productivity and scheduling.
5. **Best Utility Practices Review Panel** – As part of our strategic initiatives, we wanted to take a closer look at our operations, from an outside perspective. Three very experienced utility managers spent two days at the ACSA in early February reviewing our operations, sharing their knowledge and making recommendations on improvements. We found this to be invaluable to step back and look closely at all our operations. We are proud of the work we do at the ACSA, and we think that came through to the panel and that shows in their recommendations. A report is being completed by the panel and will be provided to our Board at an upcoming meeting.
6. **ACSA Capital Projects Update** – The adopted Capital Improvements Program (CIP) totals \$5.6 million in projects. Below is an update for each of our current capital projects, as well as the “new” projects that are proposed in the FY 2019 CIP which is a \$6.2 million program:
  - **Berkeley Water Main Replacement** – This project replaces water mains in the Berkeley subdivision that are failing and leaking. The lines are nearly 60 years old. Work has been completed, with 100% of the water main installed. All of the customers in this area have had

their services switched over to the new water mains. This is another project that has been coordinated with City Gas, and new gas mains were installed. Final paving has occurred.

- **Glenmore Water Tank Project** – This project is for system redundancy and emergency backup. The present line extends 4 ½ miles to Glenmore. The project is now under construction for a new waterline and tank to serve the Village of Rivanna. We have also designed some additional security measures into the project. Work began after the first of the year.
- **Orchard Acres Water Main Replacement** – Older (59 years) water mains to be replaced in Crozet. Design is complete and easements have been obtained. The project contractor begins work in late March.
- **Camelot Sewer Rehabilitation** – Sewer replacement, relining, and manhole repairs to reduce infiltration and inflow are needed for a well-functioning sanitary sewer. Work is underway.
- **ACSA Facilities Master Plan** – Study underway to look at the short and long-term future of ACSA properties (Crozet, Avon Street, Pantops) and develop a master plan for the long-term needs of the organization as we continue to grow and add customers. A Phase I relocation of the maintenance offices on site has been completed. Additional parking and interior space renovations are the next step. A conceptual site development plan for Avon Street is under discussion with County Planning staff.
- **Camelot Water Main Replacement** – Replacement of nearly 50-year-old water mains that are also undersized. Design work is underway at the 50% stage, and field fire flow testing is being scheduled.
- **Scottsville Water Main Replacement** – Replacement of an aging water main along East Main Street. We are in the 90% design stage on this project, with field surveying completed. We are in the easement acquisition phase, including with the CSX railroad.
- **Barterbrook Water Main Replacement** – Replacement of aging and badly deteriorating water mains along Solomon Road, North Berkshire Road, and Inglewood Drive. We have had a series of water main breaks in this area and replacement is needed. The bid opening for this is March 29<sup>th</sup>.
- **Ashcroft Water Pump Stations Improvement** – This project will upgrade two existing water pump stations, which will result in quicker refill of the storage tank and improved water quality. 100% design documents are complete. Project pending state review and communications link.
- **Peter Jefferson Place Pump Station Improvements** – This pump station is operating inefficiently and a study was completed to determine the best solution to improve it. Design is at 90% completion for pump and piping replacement.
- **Glenmore Drainage Basin Sewer System Study** – We have seen wet weather issues in the Glenmore system to the point that this

drainage basin has become a priority. The study is complete. The recommendations include a number of manhole rehabilitations.

- **Madison Park Pump Station Upgrade** – Constructed 33 years ago, by a private development, and the original equipment is wearing down, building undersized, and not able to install SCADA (computerized controls). The original plan was to replace this pump station on-site. An alternative to be evaluated is to connect to a new gravity sewer main extension, with no pump station required. The connection would be to a proposed extension through Bellair from the Morey Creek Interceptor to the proposed UVa development known as Ivy Mountain (the old Kluge Children's hospital site on Ivy Road).
- **Oak Forest Sewer Pump Station** – This is an aging pump station in need of rehabilitation. With the adjacent Stonefield development, we now have the opportunity to extend a sewer main and eliminate this aging pump station and avoid an expensive upgrade. We are in the 50% design stage and under review.
- **AMI Feasibility** – Advanced Metering Infrastructure project feasibility to evaluate various electronic metering systems to replace our current handheld reading system. Six proposals have been received and are under review.
- **Jefferson Village Water Main Replacement** – Replacing older (49 years) water mains made of inferior pipe product. Since originally part of a former well system, many of the mains are undersized. Surveying and the Design phase began in October.
- **Meriweather Hills Water Main Replacement** – This water main is reaching the end of its useful life and is in need of replacement. Another of the former well system lines. Design work has begun and the consultant is working on the 50% stage of design documents.
- **Pantops Sewer Study** – Area study to reduce wet weather infiltration and inflow (I/I). Will likely lead to targeted sanitary sewer system rehabilitation.
- **SCADA (computerized monitoring)** – A three phased project is nearing completion for over 40 water and wastewater facilities in the ACSA system. Another of our projects to provide emergency alerting and monitoring to assure reliable water and wastewater service. We have completed the second phase of work with the third phase of design completed.
- **Security Projects (New)** – From a detailed Vulnerability Assessment of all ACSA facilities, a number of security projects to reduce risk are being proposed in the Capital Improvements Program.
- **Crozet Phase IV Water Main Replacement (New)** – Our Strategic Plan calls for the eventual replacement of all inferior pipe products for the (pre 1990) water mains in our system, as they are older and made of a weaker material than the current industry norm. This project continues our systematic program to replace the aging and undersized

water mains in the Crozet Water System. This is the fourth of five phases that have been defined to carry out these improvements.

- **Hessian Hills Water Main Replacement (New)** – The water mains in the Hessian Hills area are of a similar age and material as the water mains in the Barterbrook Phase 2 Project, plus they are in the same general area. By extension we are assuming their condition is similar with respect to deterioration and they are also undersized throughout most of the subdivision. This project follows our Strategic Plan goal to replace aging and undersized water mains throughout our system. It will also eliminate a small amount of plastic pipe installed in the early 1980's.
- **Recoating Scottsville Water Storage Tank (New)** – As part of our new program of regular water storage tank cleaning and inspections, it was determined that the Scottsville Tank was exhibiting generalized degradation of the paint coating on the interior and exterior surfaces. This tank has not been recoated since its construction approximately 25 years ago. To be proactive in extending the useful life of our tanks, our consultant recommended the Scottsville Tank be recoated.
- **Hollymead Drainage Basin SSES (New)** – ACSA staff has identified other large drainage basins to be evaluated for infiltration and inflow (I/I) to continue our efforts to maintain the integrity of our wastewater collection system. The study area includes the oldest portions of the Hollymead Subdivision, as well as, the offsite portion of the sewer main that serves the westernmost area of Forest Lakes South. The Forest Lakes Offsite Sewer will be the primary collector for the upcoming Brookhill development and the evaluation of this trunk main will provide an excellent baseline of pipe integrity in advance of the future construction activities around this sewer.
- **Sewer Pump Stations Comminuters (New)** – Three sewer pump stations: Glenmore, Georgetown Green, and Crozet have all been experiencing higher than normal amounts of solid debris that have been causing undue wear and tear on our pumps, reducing their effective life. They have also been subjected to clogging from the fibrous cloth wipes that are marketed as flushable, but do not break down in the sanitary sewer collection system. Maintenance staff identified the need to install comminuters (aka grinders) in the wet wells or just upstream of them, to eliminate these solids that are adversely impacting our pumps. It is anticipated some of the work will be performed in-house by Maintenance Department personnel.
- **Parkview Drive Water Connection (New)** – The water in Thurston Drive experiences a high degree of water age and is currently the location of one of our fixed position automatic flushing assemblies. This flushing assembly produces a high volume of wasted water to keep water age down and maintain an acceptable chlorine residual. ACSA staff has identified a water interconnection between Thurston Drive and Three Notch'd Road along Parkview Drive that could reduce

the amount of time for water to reach the Thurston Subdivision and potentially eliminate the need for the flushing assembly.

- **Stoney Point Water Main Replacement (New)** – This project was originally intended to be part of the Scottsville Phase 4 Water Main Replacement Project but ACSA staff recognized that it could be constructed by our Maintenance CIP crew. The pipes are undersized cast iron and galvanized due to it originally being a well system and they are approximately 50 years old. This project is in accordance with our Strategic Plan to eliminate aging and undersized pipe throughout our water system.
- **Redfields Sewer Pump Station Abandonment (New)** – This wastewater pump station was constructed 23 years ago by private development and the parcel is too small to add an emergency standby generator. The Maintenance Department must rely on a portable pump to operate this station during power outages. With the development of Wintergreen Farm Subdivision, ACSA staff saw an opportunity for a sewer main extension that could eliminate this pump station. Now that the sewer main extension is in place the timing is perfect for abandoning this wastewater pump station.

Let us know if you have further questions or comments. We are more than glad to meet with you about any of our projects or facilities, or provide a tour if that would be useful.