

MEMORANDUM

To: Albemarle County Board of Supervisors
From: Gary O'Connell, Executive Director 
Date: September 24, 2018
Re: Albemarle County Service Authority (ACSA) Quarterly Briefing
cc: Mr. Jeff Richardson, County Executive; ACSA Board of Directors;
ACSA Leadership Team

We once again appreciate the opportunity to share with you what is happening at our water agency, the Albemarle County Service Authority. We pride ourselves on safe, clean, reliable Albemarle water. Our employees work hard for this to happen and keep that trust in our water, and provide good customer service. Here are some updates from the ACSA.

- 1. Strategic Plan Five-Year Completion** – In July, the ACSA completed its five-year (2013-18) Strategic Plan. This was an ambitious plan with lots of completed actions over the past five years. Our overall strategic goals were around customer service initiatives, review and updates of all policies, new system improvements, and improved communications. Some of the accomplishments: major website update; increasing use of social media; total revisions of all ACSA policies and processes (Rules and Regulations, Personnel Rules, plus new pay plan and job descriptions); Purchasing Procedures; new Performance Evaluation Process; Departmental Operating Procedures; new Financial System; SCADA implemented – computerized monitoring on all ACSA facilities; increased customer communications – flyers, newsletter, and a budget rate summary sent out with monthly bills; implemented Environmental Management System (EMS); over \$26 million five-year capital projects for water and sewer rehabilitation, repairs and replacements; Regional Water Utility Emergency Plan; addition or major improvement in a number of maintenance areas: easement clearing, water tanks, annual inspection of all fire hydrants, valves exercising, televising sewer lines, wet well annual inspections/cleaning; aggressive leak detection program; expanded FOG (fats, oils, and grease) prevention and education program; new Board Financial policies; annual rate model updates along with two rate studies; phone system replacement; Four Party Rivanna agreement approval – debt service formula change; long-range facilities plan includes Avon property; Best Practices Review Panel by Utility Professionals;

Succession Plan adoption; water and sewer hydraulic modeling; leadership development training; fire hydrant replacement program; full ACSA facility emergency vulnerability assessment with over \$1 million in upgrades to strengthen our systems emergency preparedness

2. **Future Strategic Plan Process** – Several reviews completed to date to identify strategic “GAPs” to address in the future: national performance measure benchmarking to 129 utilities; peer utility manager Best Practices Review Panel; Employee “Insights” survey. This fall we will focus on three strategic plan process areas: Effective Utility Management (EUM) assessment strategic planning tool; ACSA customer survey, and additional employee feedback. A new three-year (2019-2022) Strategic Plan is planned to be in place by January 2019. The two major focus areas are implementation of AMI (advanced metering) and CMMS (computerized maintenance management system – customer service requests, work orders, inventory and asset management). Additional goal areas: continuation of succession planning; additional Best Practices Review; finalize Emergency Response and Business Continuity Plan with annual exercises; financial system upgrade; cyber security assessment; completion and implementation of the long-range Facility Master Plan; and annual water audits (water conservation and water use tool). Overall goal is safe, clean, and reliable Albemarle Water.
3. **Best Practices Review Panel** – In the spring, we invited three very tenured water utility general managers to spend two days assessing the ACSA. This an innovative and cost-effective approach to reviewing Best Practices and where the ACSA stands strategically compared to our peer utilities. Their recommendations focused on two new areas which we have underway: AMI (advanced metering) and CMMS (computerized maintenance management). The Panel’s overall recommendations included: “well-managed organization; dedicated group of staff; well-maintained system, waterline replacements, are proactive; nice, well-kept facilities; ACSA dealing with the right strategic issues; good approaches, able to give good customer service and responsiveness; financially strong, good value for customers.”
4. **AMI (Advanced Metering Infrastructure)** – One of our strategic plan items is to explore the various AMI technologies that are available in the water metering world. Most medium and large sized water utilities have already converted to the AMI technology. The feasibility study, which is underway, evaluates our technology options and looks closely at the needs of our customers. This has been a six-month long feasibility study process. At the November Board meeting, 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.

5. **CMMS – Computerized Maintenance Management System** – This system for customer service requests, work orders, inventory and asset management 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. We are in the process of finalizing the selection of one best practices software vendor.
6. **Water Restrictions** – Following last fall’s dramatic drop in supply at the South Fork Rivanna Reservoir, and subsequent water conservation – water restrictions, we reviewed the current water restrictions and the associated sections of the County Code. We have been working with the County Attorney’s Office on a draft to present to the Board of Supervisors to update the water restrictions for a drought or a water emergency. We understand these amendments will be made as part of a larger County Code update. The ACSA Board recently adopted an updated version of the ACSA Emergency Water Restrictions.
7. **ACSA Capital Projects Update** – The newly adopted FY 2019 Capital Improvements Program (CIP) starting July 1st is a \$6.2 million program (let us know if you would like detailed maps or a tour on any of the projects). Highlights of some of the more major projects are detailed below:
 - **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 water tank and pump station to serve the Village of Rivanna. We have also designed some additional security measures into the project. Work on the pump station began in June, to be finished in December, and the tank construction was completed this month.
 - **Orchard Acres Water Main Replacement** – Older (59 years) water mains to be replaced in Crozet. The project contractor began work in late March, and we are over 80% complete, with completion anticipated in November.
 - **Camelot Sewer Rehabilitation** – Sewer replacement, relining, and manhole repairs to reduce infiltration and inflow are needed for a well-functioning sanitary sewer. All the relining work is complete, overall project is 80% complete.
 - **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. 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.
- **Scottsville Water Main Replacement** – Replacement of an aging water main along East Main Street. We are in the 100% design stage on this project, with easement acquisition underway. We plan to bid this fall.
- **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. Construction has begun and is 65% complete.
- **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. Contract was awarded in July, with construction completion in March 2019.
- **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 100% completion for pump and piping replacement. Project is being bid.
- **Glenmore Drainage Basin Sewer System Rehabilitation** – We have seen wet weather issues in the Glenmore system to the point that this drainage basin has become a priority. A number of manhole rehabilitations have been completed, with a small number left to finish.
- **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 monitor). The plan is to replace this pump station on-site.
- **Oak Forest Sewer Pump Station Abandonment** – 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 100% design stage.
- **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. Design is at 50% completion.
- **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 mains. Design work has begun, and we are at the 50% stage of design documents. A well-attended community meeting was held in early August.
- **Pantops Sewer Study** – Area study to reduce wet weather infiltration and inflow (I/I). This study will likely lead to targeted sanitary sewer system rehabilitation. Flow monitoring and manhole inspections have

begun, and are 40% complete on the investigation portion of this project.

- **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 design completed.
- **Security Projects** – From a detailed Vulnerability Assessment of all ACSA facilities, a number of security projects to reduce risk were proposed in the Capital Improvements Program for completion in 2019.
- **Crozet Phase IV Water Main Replacement** – 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** – 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 major 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** – 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, we have scheduled for the Scottsville Tank to be recoated.
- **Hollymead Drainage Basin SSES** – 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. This 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 an 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 Comminutors** – 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** – 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 and provide better water quality.
- **Stony Point Water Main Replacement** – 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** – 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.