

The decades long plan to develop a new water supply for the Charlottesville/Albemarle urban area may be reaching a climax. The Rivanna Water and Sewer Authority (RWSA), which provides treated water to the City of Charlottesville and Albemarle County Service Authority (ACSA) for distribution to their respective customers, has narrowed the list of possible alternatives for additional sources of water.

Water supply and demand projections were recently updated by RWSA's engineers to reflect the 2002 drought. It is now projected that the urban area water demand would equal the available supply under drought conditions by 2008. It was also determined that the release of surplus water in Beaver Creek Reservoir near Crozet could meet the urban area demand until 2018 while still meeting Crozet's anticipated water needs.

A planning period of 50 years is used in planning water supply projects. By the year 2055 it is projected that the urban area will need an added water supply of 9.9 million gallons per day (MGD). The added supply accounts for estimated future storage losses (sedimentation) in existing reservoirs as well as additional customer demand resulting from community growth. Reflecting the policies of ACSA and the City, projected demand has been adjusted to reflect some improvements in water conservation.

With this timeline in mind, alternatives to increase the water supply to meet the 2055 demand were identified. In order to comply with federal regulations, these alternatives have each been reviewed based on the following criteria: wetlands impact; stream impact; cost; logistical issues; cultural resources; threatened and endangered species; land acquisition area; and other considerations. After considering these criteria some of the alternatives were eliminated from consideration, and others were included on the "short list" of possible alternatives.

Those alternatives that were eliminated as possibilities include: no action; any new reservoir; raising the height of the South Fork Rivanna Reservoir (SFRR) dam by more than four feet; Sugar Hollow Expansion; and pump-back from Moores Creek Waste Water Treatment Plant (MCWWTP). "No action" was not a viable option as it does not meet the projected community water needs of 2055. Environmental impacts ruled out the option of a new reservoir, greater than four-foot crest increases at SFRR and any expansion of Sugar Hollow. Additionally, federal land impacts caused by an expansion of Sugar Hollow made that option unlikely. Regulatory concerns eliminated the indirect reuse of water pumped-back from MCWWTP.

Making the "short list" of possible alternatives to increasing the water supply are: James River Intake; raising the dam at Ragged Mountain Reservoir; adding four-foot crest gates at SFRR; dredging SFRR; and increased use of Beaver Creek Reservoir. The capture of water from the James River could be done as a stand-alone project of RWSA or might be undertaken in cooperation with the neighboring communities of Louisa and Fluvanna. Raising the dam at Ragged Mountain Reservoir would require action right away, as the dam must be rehabilitated for safety reasons, and the most cost effective time to raise the height of the dam is during this rehabilitation work. This work appears feasible although approval issues still exist. Adding four-foot crest gates at SFRR is a relatively low cost

project, but would have to be combined with another component to achieve the necessary safe yield in 2055. The possibility of dredging requires further cost, feasibility and logistical studies; it too would have to be combined with other components to obtain the desired safe yield increase of 9.9 MGD. Increasing the usage of Beaver Creek Reservoir could be done in the interim until other alternatives are developed, or could be used on a long-term basis in combination with other concepts.

These “short list” alternatives are currently undergoing further review. Federal and State Regulatory Agencies, which must approve any project, have been asked to provide feedback on these alternatives. These agencies include: United States Army Corps of Engineers Norfolk District; United States Environmental Protection Agency, Region III; United States Fish and Wildlife Service; Virginia Department of Environmental Quality; Virginia Department of Game & Inland Fisheries; Virginia Department of Conservation & Recreation Division of Planning and Recreation; Virginia Marine Resource Commission; Virginia Department of Historic Resources Division of Resource Services and Review; Virginia Department of Conservation & Recreation Division of Natural Heritage; and the Virginia Department of Health. Locally, regulatory review of all options will be completed by: the RWSA Board of Directors, the Albemarle County Board of Supervisors, the Albemarle County Service Authority Board of Directors, and the City of Charlottesville City Council.

The schedule for moving forward with these water supply expansion projects will be dependant upon the results of the regulatory review process.