

This week Rivanna Water and Sewer Authority (RWSA) voted to reduce wholesale water rates. In response, the Albemarle County Service Authority (ACSA) followed suit with a reduction to retail rates charged to ACSA water customers. The City of Charlottesville is expected to follow suit and reduce rates.

At first glance this might be construed as an indication that the drought is over. In fact, both RWSA and ACSA cautioned that this assumption was dangerous, and both stressed they are still very much concerned about drought situations, citing that there are still many unknowns, including the status of groundwater.

As the reduced rates are not intended to be an indication of the status of the drought, they are intended to ensure equity. Last fall, emergency drought rates were established by RWSA to ensure its budget was met, in the face of reduced flows, which occurred as a result of the community's conservation efforts. ACSA and the City of Charlottesville faced budget shortfalls themselves, and these combined with higher costs, forced them to increase retail rates.

While water costs are returning to near normal rates, perhaps leading to increased consumption, conservation is not a notion that can any longer be ignored by area citizens. The Charlottesville area has the dubious distinction of having geology that is not conducive to plentiful groundwater supplies and an unpredictable climate. For this area, it is not so much "climate change" as many have proclaimed, rather a long history of climate variability. These two factors are the primary reason few are willing to declare that the drought is over.

One easy way to reduce the demands placed on both the public water supply and the groundwater system is the harvesting of rainwater. "Rainwater catchment device" has become common jargon over the last few months, and it is something any homeowner can install with relatively little cost or effort.

Rain barrels and cisterns are devices that catch water that has fallen on a roof or other solid surface. Typically this captured water is dedicated to non-potable uses, such as watering gardens, filling pools, or washing cars. Some, however, have installed filtration and treatment systems, to allow potable uses as well.

These devices are most effective when connected directly to a downspout that captures rooftop runoff. The water is then stored for a later use. It is sometimes hard to imagine that a light rain could provide any substantial amount of water, but the reality is quite the contrary. A quarter inch of rain falling on an average size roof can more than fill a standard 60-gallon rain barrel. In fact, one inch of rain on 1,000 square feet of roof equates to 623 gallons of water. That is certainly a lot of "free" water.

Manufactured rain barrels can be purchased at garden shops, home improvement centers and occasionally from local conservation organizations. With a little ingenuity you can build your own rain barrel from a barrel, some

garden hose and a few other bits and pieces. The Thomas Jefferson Soil and Water Conservation District (TJSWCD) web site, <http://monticello.avenue.org/tjswcd/> offers an excellent guide with directions to make your own. If you have a large roof area, look into installing “buddy barrels” that allow for overflow should you collect more water than will fit in your rain barrel.

If you would prefer a more discrete catchment system, consider installing a below ground cistern. A standard septic tank works very well. Cisterns are of a scale that may require the average homeowner to seek assistance from a qualified contractor, but the TJSWCD web site will provide a good starting place if you are considering installing one.

Regardless of what type of catchment system you would like to install, there are two primary concerns: mosquitoes and child and animal safety. As last year’s West Nile Virus scares alerted us to the dangers associated with mosquitoes and the viruses they can carry, everyone is now more aware of the need to control or eliminate their breeding habitats, most commonly stagnant water. With the addition of rain barrels and cisterns, care must be taken to avoid providing breeding grounds for these virus vectors.

The best technique for avoiding mosquitoes is to eliminate standing water. Empty rain barrels as soon as possible after they are filled. This will not only reduce the mosquito population, but will ensure that the catchment is ready for the next rain.

Physical barriers are another way to limit mosquito development. Cisterns can be buried under ground, with downspouts running directly into them, offering little access for mosquitoes. Rain barrels should have fine wire mesh or other coverings placed over any openings. This is not foolproof, as mosquito eggs can sometimes still find their way through even the finest of screens. If physical barriers do not work, chemical control is possible.

Non-toxic mosquito dunks can be placed inside rain barrels. These insecticides will kill any larvae they may hatch in the standing water. Mosquito dunks are not dangerous to humans or animals, and will not damage plantings if treated rain barrel water is used for irrigation purposes.

Biological controls are also possible for eliminating mosquitoes. Fish can be added to a rain barrel for mosquito larvae control. One drawback to this method is that you must maintain water levels at a sufficient height to support the fish. Another excellent biological control is to promote bird and bat habitats. While this will not necessarily prevent or eliminate mosquitoes all together, birds and bats will help to keep mosquito populations in check.

Drowning is a concern, so it is important that rain barrels and cisterns be secured and out of reach of little hands and feet. Even if there are no children or pets in the area of your water catchment system, consider the wildlife that could visit in search of a drink, and try to eliminate any access to open water.

Now is a good time to look into the benefits of installing a catchment system at your home. We do not know what the weather will bring us this summer, but everyone can do their part to reduce the demands placed on our public water supply and the groundwater system. Conservation will benefit us all.