



Times-News

There are many ways to help conserve water at home

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ECO NOTES



Not long ago a projected drought was a minor inconvenience, a weather fluke mentioned in passing at the water cooler. As we scan the region today, however, an intense countdown has begun with dire predictions of spigots going dry in several places not far from here. Unfortunately, the countdown is no longer measured in months, but weeks.

Why are we facing this persistent drought? Climate change is certainly a major factor. Climatologists tell us that as the earth warms, the resulting weather patterns will be increasingly more volatile. Ryan Boyle, state climatologist for North Carolina, believes that increased population growth makes us more vulnerable to drought as the demands on our water supply rise. In the meantime, drought conditions are forecast to continue through at least the winter. The good news is our parched earth forces us to become more vigilant about the depletion of our natural resources.

The availability of water and its conservation has plagued human society for centuries. In developing nations, 1.1 billion people lack clean water and 1.8 million children die each year due to water related problems. By 2025, the United Nations predicts 3 billion people will be scrambling for clean water. Most of the world's people consume between 5-13 gallons per day, but in the United States water consumption is closer to 158 gallons per day per person. In Western North Carolina we have an embarrassment of riches. Half a dozen watersheds come through our area, and its availability for drinking, household use, industry and recreation is taken for granted. Fishing, boating and other water-related leisure activities bring in millions of dollars to county coffers each year.

But we may have been going to the well once too often. Current rainfall is more than a foot below normal and the source of our municipal drinking water, Mills River, is down from its normal flow this time of year of 80 cubic feet per second to 31 cfs. Statewide, 56 percent of North Carolina's population is under mandatory water conservation restrictions and another 24 percent is under voluntary restrictions. Durham has less than 59 days of water left in their lake and reservoir and Raleigh is counting down from 100 days.

So what can we do as a community, both as residents and business owners? The best way to approach water control is by cutting usage, tapping into nature's pipeline and protecting our rich natural heritage of waterways.

Controlling water usage

Because we've taken water for granted for so long, few of us are aware of how much water gets wasted (literally) down the drain. We lose up to 18 percent of our public water from leaks in the infrastructure, a loss of nearly 1.2 million gallons a day. According to city utilities director, Lee Smith, Hendersonville is hoping to get grants to cover a system-wide audit in the future. But there's much that individuals and businessmen can still do.

- **Residential irrigation:** A home with an acre lot can use up to 200,000 gallons of water each year just for lawn irrigation. Our plants and grass only use a small portion of this and the rest flows back into our waterways. Replacing grass with rock gardens and drought resistant landscaping can eliminate a huge amount of this loss. Using mulch and permeable materials for driveways helps to recharge water back into the ground rather than forcing it into the closest stream. Using drip irrigation rather than conventional water sprinkler systems can also eliminate a lot of this water waste. If a sprinkler system must be used, installing a rain shutoff device, soil moisture sensors, or humidity sensors can better regulate irrigation.
- **Appliances:** Clothes washers that meet Energy Star criteria use the latest technology to cut energy and water consumption by over 40 percent compared to conventional washers. Many of these washers save 7,000 gallons of water a year. Over the 11-year life of the washer, that's enough water to fill up three backyard swimming pools or provide a lifetime of drinking water for six people. Energy Star qualified dishwashers use at least 41 percent less energy than the federal minimum standard for energy consumption and substantially less water than conventional models.
- **Bathroom restraint:** Much of our wasted water occurs in the bathroom. Besides turning off the water while teeth brushing and taking shorter showers, consider your potty. Older toilets can use as much as six gallons per flush. Use of super-efficient low flow toilets can substantially cut water usage. Shower timers, low flow faucets and shower head adjustments can cut hundreds of gallons of water usage a day. And don't forget to check the plumbing for leaks.
- **Reusing grey water:** Collecting wastewater and using it in other parts of the house can save thousands of gallons of water a year. Some people are now using a water basin in their kitchen sink to catch their wastewater and then using it to flush the toilet. Some have gone so far as to capture used water in their showers to use for other purposes.
- **Nature's pipeline, capturing rainwater:** The average residential roof becomes a 1,250 gallon waterfall during a normal rain. Most of this drains to the nearest creek. Rather than losing this water (if it ever does rain again!), how about using it to water your plants or for other uses around the garden? A rain barrel can save about 1,300 gallons of water during the summer months. They are connected to downspouts and reused for garden and lawn. In addition to saving water, they guard against storm water runoff which is a leading cause of water pollution, loss of water ecosystems and stream bank erosion. Rain barrels can be built and installed by homeowners with simple tools and supplies or can be purchased from local dealers for \$70 to \$120. Basic rain barrels have a spigot that can be attached to a garden hose. More sophisticated types use pumps to increase water flow.

Cisterns are even better than rain barrels because they have a larger capacity and are usually connected to house plumbing systems, but their costs are higher. Cisterns can be purchased and installed by local dealers.

ECO, in partnership with the Mud Creek Watershed Restoration Project, is considering doing bulk purchases of rain barrels or cisterns for our community. If you are interested in putting these into your home, please contact ECO about participating.

ECO Notes is provided by the Environmental and Conservation Organization, a nonprofit organization dedicated to clean air, clean water, recreation, and the conservation and preservation of the natural heritage and resources of the mountain region. ECO can be reached at (828) 692-0385 or on-line at www.eco-wnc.org.