

## **RAINWATER: Don't Let It Flow Away**

**By Wendy Patoprsty**

Estimates vary, but according to the U.S. Geological Survey, each of us uses between 80 and 100 gallons of water every day.

Where does our clean water come from? In the Town of Boone, drinking water comes from the South Fork of the New River. But outside town limits, water comes from wells or springs. Because groundwater is under our feet and not in our view, it is easy to take for granted. Turning on the faucet has never been easier, but it can take decades, or even millennia, to replenish groundwater.

Water stored in the ground can be compared to money in a bank account. If you withdraw money at a faster rate than you deposit money, you will eventually face a day of reckoning, if not a criminal court judge. Pumping water out of the ground faster than it is replenished also causes huge problems over the long-term. You can't just invent new water like our government prints new money.

How can we help keep our groundwater resources plentiful? Picture two scenarios -- rain falling on a forest of trees and shrubs and rain falling on a parking lot. Obviously, as rain falls on the forest, it will be absorbed into the earth and can replenish our groundwater. But a paved area will repel the water and send it quickly away.

When it rains, why should we let it all flow away?

Rain falling on rooftops, parking lots, and roads doesn't allow water to slowly infiltrate the ground to replenish groundwater. Instead, rain water, as stormwater, washes into gutters and drains and quickly into our streams, causing a "flashy" rise in the water levels of the rivers. Excess stormwater can carry pollutants into the stream and add pressure to the banks, causing erosion, which can be very harmful to water quality. Most importantly, once rainwater flows off the mountain, we can no longer use it.

Here are two ways to collect and capture rain water in the high country, so that it can be used again: rain gardens and rain barrels.

Rain gardens are shallow depressions designed to collect rain from impervious surfaces. Rain gardens utilize plants, bacteria, and soils to cleanse the water as it seeps slowly back into the ground. These areas can be beautifully planted and blend right into the landscape. Rain Gardens remove pollutants using physical, chemical, and biological mechanisms: absorption, microbial action, plant uptake, sedimentation, and filtration. A rain garden also helps to replenish groundwater by allowing infiltration of stormwater runoff. If you are interested in installing a rain garden at your home, visit [www.bae.ncsu.edu/topic/raingarden/](http://www.bae.ncsu.edu/topic/raingarden/)

Rain barrels are a great way to reduce storm water runoff and to save water for a dry spell. If you have gutters on your house, you may be able to collect 55 gallons of water during a ½-inch rain event, by directing a downspout to a rain barrel or cistern. Rainwater is softer than tap water; it has no chlorine, lime, or calcium. It has less sediment and dissolved salts and is warmer than tap water. It's a great natural resource for washing cars or windows and for watering plants and gardens. Pre-made rain barrels and cisterns can be purchased from numerous sources online. You can also make your own:

Visit [www.cwp.org/Community\\_Watersheds/brochure.pdf](http://www.cwp.org/Community_Watersheds/brochure.pdf) to view an online step-by-step brochure with pictures on how to build and install a rain barrel.

Rain is a resource that we should no longer let flow away.