Other views

Damage from Reedy's next flood can be prevented

By Jason Van Driesche

On July 29, the Reedy River roared. Intense rain in West Greenville sent the river up and over the banks, where it rushed through homes and businesses, destroyed property and generally wreaked havoc. At its peak — 19.2 feet on the Westfield Street gauge on the western edge of downtown — this flood was the second highest ever recorded on the river.

Some called the flood a natural disaster. An "act of God," one person said — the implication being that we humans had no hand in the magnitude of this flood's impact on our community. Of course, the fact that the storm occurred in the first place was entirely out of our hands. But to assume that the consequences of the storm were inevitable is wrong and dangerous.

First a few facts. This storm dumped about 6 inches of rain at its focal point in northwest Greenville. According to the National Weather Service, we can expect this much rain in a 24-hour period about once every 10 years. The difference with this storm was that those 6 inches fell in just three or four hours, and almost all on an area just a few miles across. So what this storm lacked in breadth and staying power, it made up in intensity.

Whether it hits in town or out in the country, rain that comes this hard and fast is going to cause a jump in water levels. Even under undeveloped conditions, rivers will flood. But in a developing watershed, the magnitude and the impact of a flood are as much a product of the human-created urban landscape as of nature itself. As such, urbanization made this flood far more severe than it otherwise would have been.

The impact of urbanization on a stream's propensity to flood is felt in two ways. First, runoff from developed land hits streams much harder and faster than runoff from forests and fields, because downspouts and pavement concentrate flow and hurry it along. Second, once stormwater reaches a stream, the decisions people have made about what to do with the floodplain — develop it or leave it in a natural state — determine whether what happens is a "catastrophic flood" or simply a time of high water.

As such, there are two lessons to be learned from this event. The first is that we need to do a better job of managing the runoff that developed land produces. While we will never fully restore the natural hydrology of a developed area, there are many proven strategies that will move us substantially in that direction. These include maintaining and reestablishing forested and vegetated buffers along rivers and streams and using technologies such as constructed wetlands, grassy swales and porous pavement to slow runoff and promote infiltration. Creating a well-designed network of facilities of this kind is a very effective strategy for taking the edge off storm events, and can reduce both the frequency and the severity of floods in urban watersheds.

The second lesson is that we need to let floodplains be floodplains. The people who were hit hardest by the flood were those whose homes and businesses were within reach of the rising waters. It is far more economical in the long run to offer landowners fair market value for their property and remove them from the floodplain than it is to provide an indefinite subsidy in the form of flood insurance and emergency grants. It also makes indisputable good sense to simply prohibit further development in the floodplain. There is no doubt that the Reedy will flood again. Our best strategy is to get out of the way.

If we take both of these lessons to heart, we will have a real opportunity on our hands: to turn what is now a huge liability into a major public asset. A developed floodplain is a drain on both public and private resources. Returned to open space, floodplains give us more than just flood protection — they can also serve as the backbone of a system of parks and greenways. Imagine such a system along the Reedy from its headwaters near Travelers Rest all the way to Lake Conestee, with walking trails overlooking beautiful constructed wetlands on all the major tributaries. What a wonderful way to put some more "green" into Greenville, and enhance its attractiveness for residents, businesses and visitors alike!

The moral of the story is simple: There isn't much use in banging our heads against a wall of water. In a developing watershed, floods are a fact of life. But if we work with the river instead of against it, everyone wins.

GUEST COLUMN

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