

Eye on environment: Slow the flow of stormwater runoff

By Arne Anselm Eye on the Environment

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In the slick rock canyons of Utah and Arizona, a brief thundershower can create a dangerous flash flood. The hard soil and exposed rock prevent the rain from soaking into the ground as it would in other natural areas, and so it runs off with a ferocity that can instantly turn a dry canyon into a dangerous river. That's the way it has been for thousands of years.

In a short time, our urbanized environment has created something similar, although safer. Concrete sidewalks and asphalt streets channel water into our storm-drain systems as quickly as possible. Even our rooftops and driveways, built to modern codes and standards, are designed to allow water to flow freely into streets and storm drains.

Our improved infrastructure, designed to protect lives and property, makes it easier for us to weather the storm. But the flash flood from free-flowing water can be a problem downstream. Years ago, before the development of paved roads and storm drains, before the roofs and driveways, much more rain would soak into the ground where it landed. Now, not only has the volume of water running off increased, it runs off faster. A gentle rain that would not have reached the creek before now turns it into a river.

You would think the plants and animals depending on the creeks would be happy to get more water, but that increased amount of water is coming in with more energy and becomes a significant force that can impact the natural habitat.

This change in the pattern of water flowing to a creek is called hydromodification. Hydromodification can lead to erosion of stream banks, channel widening, and the loss of habitat or someone's property.

The state is requiring new developments that eventually drain to natural creeks to prevent the damages of hydromodification. The Ventura Countywide Stormwater Quality Management Program has drafted a Hydromodification Control Plan to assist developers in understanding these rules and provide them with the tools to design projects to prevent downstream hydromodification.

A workshop on this draft plan will be held from 9:30 to 11:30 a.m. Tuesday at the Ventura County Government Center. For more information and to download the draft

Hydromodification Control Plan, visit <http://www.vcstormwater.org>.

There is no requirement for existing developments to prevent hydromodification, but there are simple actions people can take that will slow the flow of rain water and allow it to soak into the ground.

If you plan to replace your driveway or concrete patio, use paving materials that have gaps allowing water to flow through rather than run off. These pavers come in a wide variety that will add beauty as they improve water quality.

Rain barrels can harvest roof runoff for future use. Available at large garden centers, these specially designed barrels are sealed to protect children and small animals and are screened to prevent mosquitoes from breeding before you use the water.

Gutter down spouts can be directed to landscaped areas or planter boxes. This will keep water from going directly to the street via your driveway. Downspouts can be replaced with a decorative rain chain that drops into the landscaping.

These ideas also reduce the pollutants commonly found in streets and gutters from washing into creeks and the ocean. Clean rain water doesn't stay clean for long once it hits the gutter. More water soaking into the ground means less pollution, less hydromodification and a better Ventura County for residents and wildlife.

The basic principles of controlling runoff through landscaping have been promoted by the Ventura chapter of the Surfrider Foundation. Its Web page at <http://www.surfrider.org/programs/entry/ocean-friendly-gardens> includes a video with some impressive time lapse photography showing how volunteers transformed one home's front yard.

Keep your eye on the environment and slow the flow of water.

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