



### **RRWA Environmental Column – March 2007**

#### **Treat Stormwater as an Important Resource**

We live in the 21<sup>st</sup> century. Most of us don't drive 1950's cars and we certainly don't use 1950's electronics; but somehow we are stuck with 1950's housing and commercial site design. 20<sup>th</sup> century site design emphasized routing rainwater away from a house or commercial area as fast as possible, putting it into a pipe and routing it into the nearest stream or river, or to the ocean. The major problem with this approach is that this "stormwater" picks up oil, grease, pesticides, fertilizers and other contaminants along the way. In most areas, stormwater is not treated before it is discharged. Contaminants in stormwater can have a detrimental effect on all life in the waterway, from the tiny insects that live in the gravel all the way up to fish and birds. Additionally, the rivers and creeks that stormwater is discharged to are often the very same waterbodies from which we derive our drinking water supply.

Modern site design recognizes two facts: 1) rainwater is a resource that should be conserved and not wasted or contaminated, and 2) water quality is protected by filtering polluted stormwater before it enters any waterbody.

How can we conserve rainwater on an individual scale? A great start is to direct the rain from our roofs into a vegetated area, rather than down the storm drain. This can be an existing lawn or garden, or a lowered, attractively vegetated area, called a rain garden. A functional and attractive addition is to catch the rain in rain barrels that store the water for later use. Another innovative mechanism for catchment and utilization of rainwater are pop-up drainage emitters. These work by releasing roof runoff some distance from the building foundation through a pop-up emitter similar to a pop-up irrigation head.

How can we filter the stormwater? Oftentimes, the easiest and cheapest thing to do is let the earth itself filter the stormwater by encouraging on-site infiltration into yards, gardens, or other vegetation. Water on its own, has very little ability to break down contaminants commonly found in stormwater. Soil, on the other hand, contains billions of bacteria and other organisms that use some of the contaminants for food. Remaining contaminants are stored in the soil where they break down over time. Pervious pavement in gardens and landscaping, like un-grouted or un-cemented pavers or flagstone, and crushed aggregate driveways are easy and attractive ways to promote infiltration. Using mulch instead of plastic sheeting in flower beds is another simple measure for increasing stormwater infiltration.

We need to break the connection between impervious surfaces and the storm drain as much as possible. We shouldn't forget that there is no "new" water. Our water goes back to the early days of Earth's formation and began its journey through the closed-loop water cycle almost four billion years ago – let's treat it with some respect.

*The Russian River Watershed Association ([www.rrwatershed.org](http://www.rrwatershed.org)) is an association of eleven cities, counties and special districts in the watershed that are working together on programs for clean water, fisheries restoration and watershed enhancement.*