

| *Expert Advice* |

## A beautiful landscape begins with proper drainage: Demystifying Drainage

By **Bob Renaud**

Whether or not you're considering a landscaping project, solving exterior drainage problems is a critical and often overlooked issue faced by many homeowners today. Over time, poor drainage can spell costly repair work for your home's foundation, basement, patio, or other outdoor areas.

Signs you may have a drainage problem include water in your basement; pooling of water near the house; damp or soggy spots; or gullies in the lawn or garden. Causes of drainage problems vary widely and often include a combination of factors such as high water tables; flawed sprinkler systems; runoff from heavy rains or snow melt; and improper grading or soil erosion. Excessive paved surfaces, bare soil, and lack of plantings also contribute to drainage problems.

While nature's forces are unavoidable, there are a number of practical remedies for poor drainage. Controlling runoff will result in a healthier landscape, prevent damage to your house and yard, conserve water, and keep pollutants from reaching lakes and streams. Consider these solutions to solve a drainage issue:

**Grading:** Because water travels downhill, you can solve many drainage problems by making sure paved and unpaved surfaces slope away from the house. In some cases, major areas of

the yard may be re-graded to improve runoff. Generally, a slope of 2 percent or more is enough to do the job.

**Gutters and downspouts:** For homes with gutter systems, check to see your gutters are in good condition, free of debris and sloping toward a downspout. Downspouts need to empty clear of the foundation, preferably in planting beds, rather than on concrete or paved surfaces.

**Catch Basins:** Below-ground catch basins are an excellent complement to gutters and downspouts, as well as a surface drain. The downspouts are directed into a small, below-ground container that collects runoff. A pipe or tubing system, otherwise known as Drain Tile System, or French Drain, hooks up to an outlet port on the basin and drains further out in the yard.

**Dry Beds:** Also known as Dry Stream Beds, these additions are constructed by replacing soil with rock. This allows water to follow a channel below the surface, moving the water to the proper location. Dry beds are particularly useful in "valleys" where water collects faster than it can be absorbed or captured.

**Drain Tile Systems:** Today's Drain Tile Systems typically consist of corrugated, sometimes perforated, pipe that carries water underground from one area to another.

One type of Drain Tile System

– commonly called a French Drain – facilitates surface drainage by routing water from one spot to another, using a catch basin on one end.

Another example of this type of system exists around many homes as a Sump Drain System, where water flows to a sump pump or gravity drain. This prevents water from leaking into basements and other underground structures.

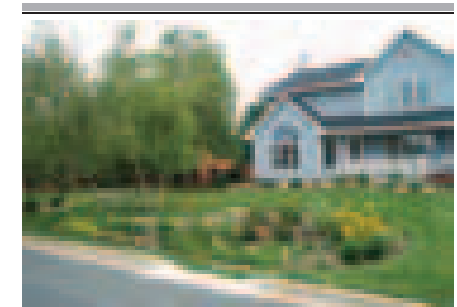
**Rain gardens:** Rain gardens are a great way to capture runoff while enjoying the beauty of native flowers and grasses. Native plants have robust root systems that channel water deep into the soil where it can be absorbed. Rain gardens should slope to a depression in the middle of the area, anywhere from six inches to two feet below the outer perimeter, depending on size. Water can be diverted to the garden with grading, downspouts, or other drainage system.

**Rain barrels:** Underground or above-ground rain barrels are an excellent way to capture runoff from gutter and downspout system and reap the benefits of this "free" resource. Rain barrels use a hose, spigot, and gravity to feed stored water to your yard or garden.

A professional landscape contractor can help remedy most drainage issues. Above all, it's important to do whatever it takes to get water away from the house, and to use a method that doesn't divert runoff onto your neighbor's property. Chances are there's a drain-



*Dry Stream Beds are a beautiful and practical landscape feature that eliminate standing water in low-lying areas. (Photo courtesy Southview Design/johnstonimaging.com)*



*Rain gardens keep pollutants out of lakes and streams by filtering storm water and channeling it deep into the soil. (Photo courtesy Iowa Natural Resources Conservation Service)*

age solution that works for your budget and will improve the aesthetics of your home or yard.

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