

Home Landscape Practices for Water Quality Protection

Bruce Hamilton, Ph.D., Extension Specialist in Landscape Architecture; Michael T. Olohan, Former Program Associate in Watershed Management; and Theodore B. Shelton, Ph.D., Extension Specialist in Water Resource Management (retired)

Stop Polluted Runoff

When rain or snow washes contaminants off the land, down storm drains, and into waterways, the result is called polluted runoff, also known as nonpoint source pollution. This polluted runoff often carries soil, leaves, trash, bacteria, pesticides, fertilizers, oil, and other contaminants that may pose problems for our waterways, health, and environment. According to the New Jersey Department of Environmental Protection, polluted runoff comprises the largest remaining source of degradation to the state's lakes, rivers, groundwater, reservoirs, and wells.

Minimizing polluted runoff from your landscape as well as reusing rain water will not "just happen." It requires planning and some knowledge of plants and landscape design. You also need to review and possibly change your lawn and landscape practices, including your use of fertilizers, pesticides, and water. For help with designing an environmentally friendly landscape, refer to Rutgers Cooperative Extension publication E080, *Landscape for Water Conservation, A Guide for New Jersey*, a priced publication available through county Extension offices. Making your home landscape environmentally friendly can begin with small landscape improvements that enable you to minimize fertilizer, pesticide, and water use.

You can make a difference right now by using the following landscape practices to enhance your property and reduce runoff. The options include planting beds, organic mulches, naturalistic landscapes, recycling rainwater, reducing runoff, and selecting the right plant.

Planting Beds

Planting beds may provide an ideal location to direct downspout runoff where it will soak into the soil to be

used by your plants. Be sure to select plants that can tolerate a wet soil. Planting beds can also replace selected turf areas with an attractive alternative.

Fertilizer, pesticide, and water use can be minimized by creating planting beds. A planting bed is an area of the landscape dedicated to flowers, shrubs, trees, and ground covers that require fewer chemical and water applications and create a pleasing landscape effect. Preferably, the plants should be climate-tolerant species with low-water use requirements. (See RCE bulletin E080, *Landscape for Water Conservation, A guide for New Jersey* for recommendations.)

A planting bed can be a raised bed that you create or simply a former turf area that you convert using edging that compliments your landscape: stone, brick, wood, steel, and plastic are all available. Edging around beds reduces maintenance time and helps unify the landscape.

Organic Mulches

Mulches used during a dry season reduce the amount of water evaporating from the soil, thereby allowing considerable water saving. Up to a four-inch layer of recycled yard waste such as composted leaves, grass clippings, and woody debris can be added into a planting bed or garden. This organic mulch may provide a small amount of nutrients, help moderate soil temperatures, retain soil moisture, and reduce weeds and rain runoff. Organic mulches do not require plastic or fabric weed barriers and don't introduce out-of-place colors as do stone mulches.

Naturalistic Landscapes

Decreasing the amount of your property in turfgrass reduces your application of fertilizers and pesticides that

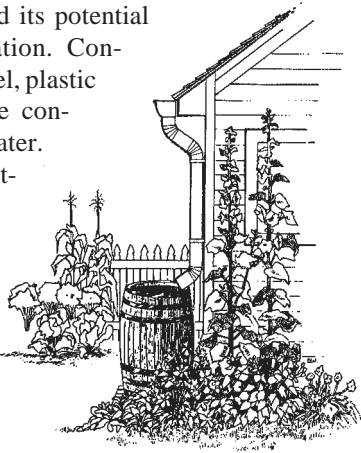


may cause contamination is misapplied. Active recreation areas should be kept in turf, but unused portions of the yard are candidates for conversion to a “naturalistic” landscape. A naturalistic landscape may include native plants and naturalized plants. Native plants are plants that were here before European colonization. Naturalized plants are those that arrived here since and have become successful colonizers. Examples include Yarrow, Queen Anne’s Lace, Purple Coneflower and Joe Pye Wood. Often, nurseries and garden centers carry naturalized plants.

You can create a naturalized landscape with the purchase of wildflower seeds or you can stop mowing. A naturalistic landscape reduces maintenance since it does not require mowing or watering but it is NOT maintenance free. Both undesirable native plants such as Poison Ivy and Pokeweed, and noxious aliens such as Multiflora Rose and Hall’s Honeysuckle will have to be removed by hand (use gloves) or spot-treated with chemical weed controls. In a naturalistic landscape, plants supply their own nutrients, eliminating the possibility of fertilizer runoff. Moreover, a naturalistic landscape creates a habitat frequented by songbirds, butterflies, beneficial insects, and wildlife.

Recycle Rainwater

Take an active role in recycling rainwater. Direct roof downspouts away from foundations and driveways to planting beds and lawns where water can soak slowly into the ground. By using the rainwater, you can reduce runoff and its potential for water contamination. Consider using a rain barrel, plastic barrel, or home-made container to store rain water. Make your own by putting a plastic trash can inside a more aesthetic container that can be lifted out and periodically cleaned. Natural rainwater has proven more beneficial for plantings and gardens than tap water because it doesn’t contain chlorine and its slightly acidic pH assists nutrient availability in most lawns and



gardens. Using the rainwater is important. However, if left to stand, it becomes a mosquito breeding area. Screening is necessary over the water to prevent mosquito breeding.

Reduce Rain Runoff

Use gravel or stone for driveways and paths to increase water infiltration and reduce runoff. Minimize paved surfaces to flow onto lawns, gardens, and landscapes. This will reduce storm runoff to local waterways and enhance your landscape plantings with a valuable, free resource: rainwater.

If your property abuts a waterway, buffer strips will help you reduce runoff. Buffer strips are vegetated areas along water courses allowed to revert, or planted, to a natural state to slow runoff of rainfall and snow melt. In addition, they help to settle out soil particles and other pollutants before they enter surface waters. They may be 15 to 25 feet or wider, depending on the site. Well-planned buffer strips can be used to frame good views or screen unsightly views. Grass left unmowed in these areas or prairie or woodland plantings often provide homes for wildlife and attract birds and butterflies.

Pick the Right Plant

Homeowners often select plants for the yard based only on the plants’ appearance. Unfortunately, these may be the wrong plants for the site. Mislocated plants are often unhealthy and require more care, including pesticides, fertilizers, and supplemental watering to survive. In selecting a plant, consider soil type, drainage, light and moisture needs, final plant size, and desired landscape effect.

Your Yard Benefits

When implemented, all of these steps will enhance your home landscape as well as help you to do your part to improve local water quality and create a healthy, sustainable landscape and environment.

Visit Rutgers Cooperative Extension on the Web: www.rce.rutgers.edu and view other fact sheets on lawns, landscapes, and gardens.

(Based on a University of Wisconsin-Extension fact sheet revised and adapted for New Jersey.)

© 2004 by Rutgers Cooperative Research & Extension, NJAES, Rutgers, The State University of New Jersey.

Desktop publishing by Rutgers-Cook College Resource Center

Revised: October 2003

**RUTGERS COOPERATIVE RESEARCH & EXTENSION
N.J. AGRICULTURAL EXPERIMENT STATION
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY
NEW BRUNSWICK**

Distributed in cooperation with U.S. Department of Agriculture in furtherance of the Acts of Congress on May 8 and June 30, 1914. Rutgers Cooperative Extension works in agriculture, family and community health sciences, and 4-H youth development. Dr. Karyn Malinowski, Director of Extension. Rutgers Cooperative Research & Extension provides information and educational services to all people without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Rutgers Cooperative Research & Extension is an Equal Opportunity Program Provider and Employer.