



Home Lawn and Garden

# Green Gardens Clean Water

Information on stormwater solutions, rain gardens and rain barrels



Pennsylvania is blessed with ample water resources, second only to Alaska in the number of stream miles in one state. While water seems so abundant, clean water is not. Our landscapes have a substantial impact on the health of our streams and rivers. Stormwater has become a major pollutant in Pennsylvania, impairing 4,170 miles of streams. When it rains in developed areas, rainwater washes pollutants such as fertilizers and pesticides from lawns, chemicals and heavy metals off paved surfaces, and sediment from bare soils into storm drains. Storm drains lead to streams and rivers, and these pollutants not only harm fish and other aquatic life but can also enter our drinking water supplies, increasing treatment costs. The increased amount of impervious surfaces, such as driveways, roads, and roofs, also causes larger quantities of rainwater to drain into our streams at a rapid rate. Even lawns growing on compacted soil can be considered impervious if water cannot penetrate the ground. The higher volume and speed of the water leads to flash flooding and erosion and does not provide any groundwater recharge. Comparatively, in a forested area, the majority of rainfall soaks into the ground and recharges our aquifers.

## What can you do in your garden to make a difference?

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### **Don't guess, soil test!**

Take a soil test to determine what nutrients your plants need. Plants and lawns may not require as much fertilizer as you think.

### **Limit your use of lawn fertilizers, herbicides, and insecticides.**

Reduce the size of your lawn by creating beds of shrubs and perennials. These landscape beds allow water to penetrate the soil and recharge groundwater. You can also reduce

your need for herbicides by mowing your grass at 3 to 4 inches. High mowing discourages weeds because higher grass shades out weeds.

### **Use natural fertilizers and time it right.**

Use compost or slow-release fertilizer on lawn areas—they release nutrients slowly. Leave grass clippings on your lawn to compost naturally. Avoid fertilizing your lawn before a heavy rain to prevent runoff of excess fertilizer. Sweep fertilizer off paved areas and rinse spreaders on the lawn so that fertilizer can be absorbed by the grass rather than lost to runoff.

### **Skip the pavement and use permeable hardscaping.**

For decks, patios, and pathways, check out porous paving options that allow water to soak into the ground like wood, stone, loose bricks, and paving blocks. You can also install green roofs on your garden sheds.

### **Plant trees!**

When it rains, trees act like giant umbrellas, intercepting rainfall in their canopies and reducing the amount of water that goes into storm drains. Their deep roots allow rainwater to infiltrate back into the soil where it can be used by plants.

### **Water wisely.**

Avoid overwatering lawns and use soaker hoses or drip irrigation in garden beds to put water where it is needed and reduce evaporation. Improve your soil with compost, which holds moisture, and use natural, dye-free mulch in planting beds. Plant your garden when less water is needed—early spring and fall are the best times to plant. Avoid planting during a drought when you have to water more.

### **Disconnect your downspouts.**

If your downspouts are connected to your sanitary sewer pipe, it is best to disconnect them and redirect the water from your roof to a lawn or landscaped area where water can infiltrate into soils or be captured in a rain barrel or cistern and used to water plants when things are dry. Make sure the lawn or landscaped area is large enough and sloped away from the home so that water does not pool near the building foundation.

### **Build a rain garden.**

Install a rain garden to collect stormwater from your rooftop or driveway. These gardens capture and filter rainwater, allowing it to recharge groundwater rather than running off your property to pick up additional pollutants. Rain garden plants are chosen to withstand periodic inundation as well as drier weather.

## Plant your stream banks; don't mow them.

If you have a stream or a small creek running through your property, plant native trees and shrubs along your stream banks. Mowed lawn grass has a very short root system, while trees and shrubs have deep roots that help hold the bank in place and prevent erosion. These deep-rooted plants also reduce downstream flooding, filter out pollutants and nutrients, and improve fish and aquatic habitat with shade.

## Plant native!

Native plants tend to be better adapted to our climate, weather patterns, and soils. Most native species are able to withstand periods of drought, once established, and do not require supplemental watering. Native species also provide habitat for native butterflies, bees, and hummingbirds.

## Dispose of household chemicals properly.

Keep soaps and cleaners out of storm drains where they can enter streams and rivers. Reduce the amount of deicers and toxic chemicals used around the home. Dispose of these chemicals properly.

## Want to learn more?

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Contact the Master Gardeners in your county to arrange for a program on stormwater solutions, designing and building a rain garden, rain garden plants, and rain barrels.



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