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## FOR MORE INFORMATION

For a comprehensive guides to rain gardens, see the following:

- *Rain Garden Manual of New Jersey* from Rutgers University at [water.rutgers.edu/Rain\\_Gardens/RGWebsite/RainGardenManualofNJ.html](http://water.rutgers.edu/Rain_Gardens/RGWebsite/RainGardenManualofNJ.html)
- *Rain Gardens: A Design Guide for Connecticut and New England Homeowners* from the University of Connecticut at [nemo.uconn.edu/raingardens](http://nemo.uconn.edu/raingardens)
- *Rain Gardens: A How-to Manual for Homeowners* by the Wisconsin Department of Natural Resources at [dnr.wi.gov/topic/shorelandzoning/documents/rgmanual.pdf](http://dnr.wi.gov/topic/shorelandzoning/documents/rgmanual.pdf)

For a list of plants for rain gardens, visit [extension.psu.edu/plants/gardening/eco-friendly/rain-gardens/plants-rain-gardens](http://extension.psu.edu/plants/gardening/eco-friendly/rain-gardens/plants-rain-gardens).

## [extension.psu.edu](http://extension.psu.edu)

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PennState Extension

## Master Gardeners

# An Introduction to Rain Gardens



PENN STATE EXTENSION MASTER GARDENERS

## What Pollutants Are Carried in Stormwater?

Pollutants such as fertilizers, pesticides, deicing salts, litter, antifreeze, grass clippings, pet waste, eroded soil, and motor oil are carried into stormwater.

## How Can a Rain Garden Help?

Rain gardens reduce runoff by capturing rainwater and allowing it to infiltrate back into the ground. They help reduce flooding and remove pollutants, provide pollinator and wildlife habitat, and beautify the neighborhood.

## WHAT IS A RAIN GARDEN?

A rain garden is a planted depression that soaks up rainwater runoff from roofs, driveways, walkways, and compacted lawn areas—water that would otherwise carry pollutants directly to our streams. Rain gardens soak up 30 percent more water than an equivalent patch of lawn.

### Where Do You Put a Rain Garden?

Choose an area where you want to soak up rainwater at least 10 feet from the house. Rain gardens can drain water from downspouts or catch water that drains off roads and walkways. Avoid areas over septic systems.

Do **not** place a rain garden in areas that are consistently wet. Rain gardens should drain completely within 24 hours.



NANCY KNAUSS

## HOW DO YOU BUILD A RAIN GARDEN?

### How Big Should a Rain Garden Be?

The size of a rain garden depends on:

- Size of the roof or lawn area to be drained
- Type of soil on your site (how well it drains)
- How deep you would like your garden to be

### Things to Know Before You Grow

- Before you dig, call PA One Call (8-1-1 or 800-242-1776) to locate underground utility lines!
- Use string or garden hose to outline the shape. Oval shapes are best.
- Remove turf. Dig the garden to the desired depth. Make sure the bottom is level.
- Gardens on a slope require more digging to create a flat bottom. Use the extra soil to build a berm on the downhill side.
- Refill the depression with soil, adding compost or decayed leaves to loosen clay soils.
- Consider including an overflow outlet for unusually heavy rains.

## PLANTING AND MAINTENANCE

### Choosing the Right Plants for Your Location

Your rain garden will have areas that range from very wet to dry. Choose native plants suited for those areas and plant them close together. Observe your newly dug rain garden after a storm to determine which areas stay wet the longest. Mark these areas with string or plant markers.

- Plants on or near the berm will be dry most of the time.
- Plants with semi-evergreen leaves will help control erosion during the winter months.
- Choose plants with a variety of shapes, colors, and bloom times to provide maximum pollinator and wildlife habitat.
- Top-dress with 2 inches of mulch to keep weeds out and moisture in.

### Maintaining a Rain Garden

- Protect your investment by watering the plants as needed for the first season.
- Remove weeds as soon as you see them.
- For the following two years, continue to remove weeds as needed, replace plants that fail, and do **not** add more mulch.

## GARDENING FOR CLEAN WATER

### What Is Stormwater Runoff?

Stormwater runoff is water from rain or melting snow that “runs off” across the land instead of seeping in the ground.

### Why Is It a Problem?

Stormwater picks up many pollutants as it runs across our lawns, driveways, and streets. These pollutants go directly into our streams and lakes, affecting our water quality and adding to floods. Flash flooding from stormwater runoff continues to cause property damage.