

## What should we plant?

Amend the soil by replacing 6" to 12" of the existing soil with a mixture containing 20-30% fully composted leaf mulch. Add 10-20% round sand for clay soils. Regrade the basin so that it is level.

- Select native plants that tolerate both flooding and dry conditions, and are suited to the amount of sunlight. Most riparian shrubs and perennials that tolerate more sun will do well in rain gardens. For a full listing of plants refer to resources listed below.
- Stabilize the basin and berm with two inches of shredded hardwood mulch to resist washout, and water plants regularly during the establishment period.

## Maintaining the rain garden

New plants need 1" of water per week, so the garden will require supplemental watering when it does not rain. Weeding is also important during the first two years. Once the garden is established, it should require minimal weeding and little or no watering.



## Demonstration Rain Garden Sites

Lansdowne Public Library  
Marcus Hook Community Center  
Media Borough Hall, rear parking lot  
Middletown Township Building (front)  
Nether Providence Municipal Building (rear)  
Sapovitz Park, Pritchard off of Providence Rd., Nether Providence  
Thatcher Park, Rutgers Ave., Swarthmore  
Triangle Park, Rutledge Borough  
Wachovia Bank and Devon Shopping Center, Radnor and Tredyffrin

## Supplemental Resources

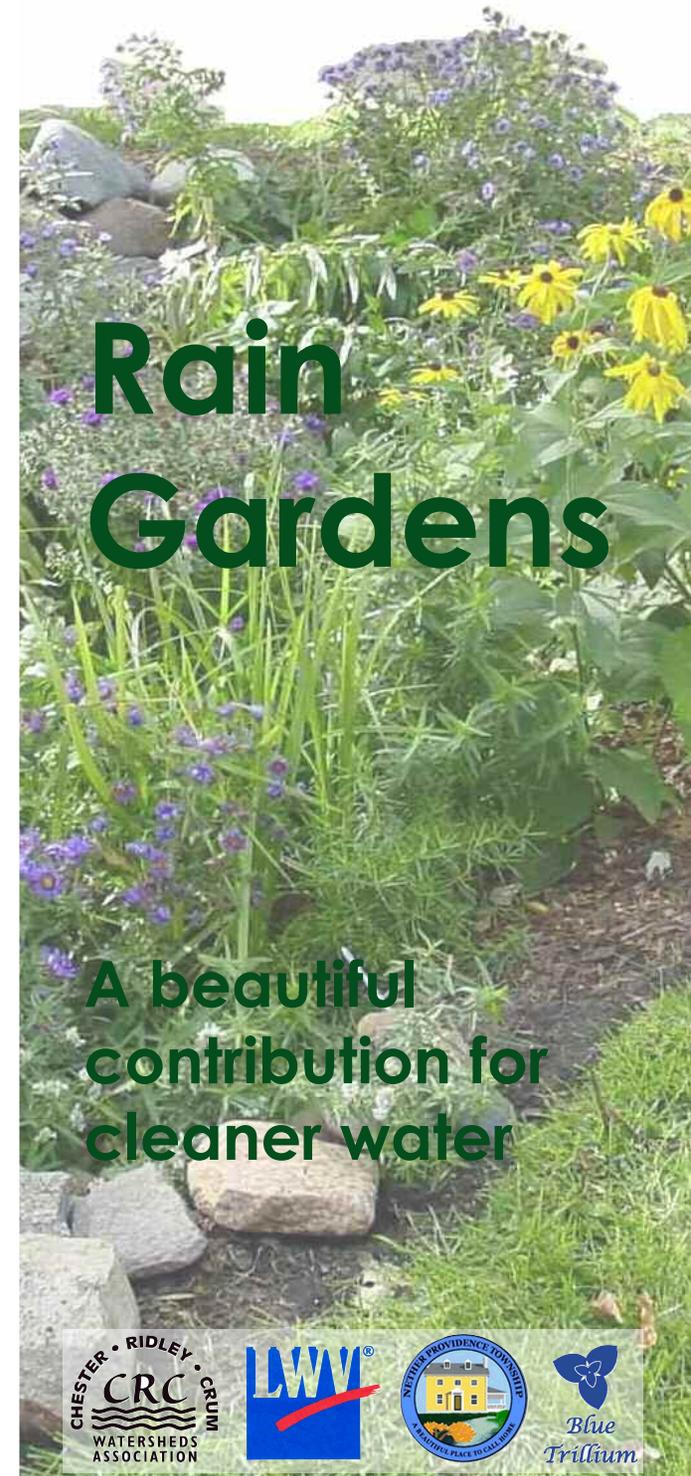
Special thanks to the Wisconsin Department of Natural Resources, and the University of Wisconsin Extension Service for excerpts from their brochure, *Rain Gardens: A How-to Manual for Homeowners*. To access the publication: [www.dnr.state.wi.us/org/water/wm/dsfm/shore/documents/rgmanual.pdf](http://www.dnr.state.wi.us/org/water/wm/dsfm/shore/documents/rgmanual.pdf)

### Some other links that might be helpful:

[www.dof.virginia.gov/rfb/rain-gardens.shtml](http://www.dof.virginia.gov/rfb/rain-gardens.shtml)  
[http://raingardens.org/docs/Create\\_A\\_Rain\\_Garden.pdf](http://raingardens.org/docs/Create_A_Rain_Garden.pdf)  
[www.raingardens.org/docs/rain\\_garden\\_factsheet.pdf](http://www.raingardens.org/docs/rain_garden_factsheet.pdf)  
[www.crcwatersheds.org](http://www.crcwatersheds.org)

Funding for this project was provided by the League of Women Voters of Pennsylvania Citizen Education Fund Water Resources Education Network

under a grant from Section 319 of the Clean Water Act from U.S. Environmental Protection Agency administered by Pennsylvania Department of Environmental Protection.



# Rain Gardens

A beautiful contribution for cleaner water



# Rain Gardens

Rain gardens are planted areas designed to soak up rain water, which drains from a roof or other impervious surface. Rain gardens allow significantly more water to soak into the ground than conventional patches of lawn, and encourage homeowners to redirect stormwater from hard surfaces.

Collectively, individual homeowners can protect drinking water supplies and local streams and enhance biodiversity by installing rain gardens on their properties.

## Why are rain gardens important?

As development has replaced forested land, stormwater runoff from developed areas has increased flooding and streambank erosion, carrying pollutants and sediment from streets, rooftops, and lawns to local streams and damaging habitat, leading to costly expenditures for stormwater management and drinking water treatment.

Rain gardens offer many environmental benefits to communities. Homeowners are choosing to install them on their properties because they:

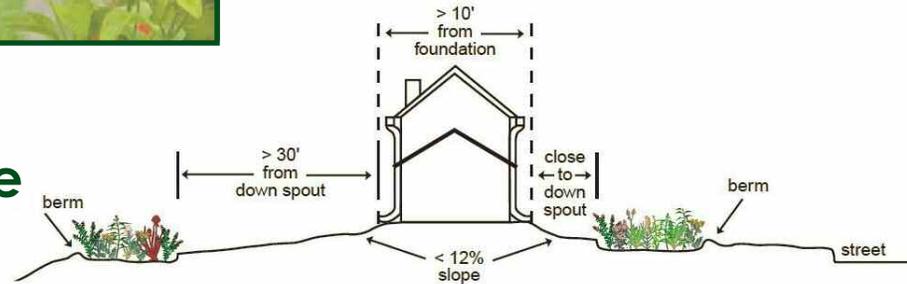
- Increase the amount of stormwater that recharges to groundwater, reducing downstream flooding and erosion problems.
- Filter pollutants from stormwater that washes off roofs, lawns, and paved areas.
- Provide attractive habitat for birds, butterflies, and many beneficial insects.



## Where should the rain garden go?

Residential rain gardens can be placed either near the house to catch roof runoff, or set back from the residence to collect water from both the roof and lawn.

- Select a sunny, gently sloping area with soils that will percolate. Do not place under a large tree.
- Rule out locations with poorly draining soil types by digging a hole 6" deep, filling it with water and checking for complete drainage after 24 hours.
- Place the garden at least 10 feet away and downslope from any buildings so that infiltrating water does not harm the foundation.



## How large should the rain garden be?

A typical residential rain garden is 100 to 300 square feet. To size your garden to capture 100% of the runoff for an average storm event, estimate the contributing drainage area from the portion of the roof that drains to that downspout and multiply that area by a factor of .32 for clay soils, assuming a 7" deep basin within 30 feet of the house.

Place the longer side of the garden perpendicular to the slope and downspout. Crescent and kidney shapes with recommended widths of about 10 feet seem to work best.

Dig out and create a basin measuring between four and eight inches deep and surround with a berm. A rain garden more than eight inches deep might pond water too long, look like a hole in the ground, and present a tripping hazard.

- Do not construct the rain garden over a septic field or in a low spot where rainwater already ponds.
- Choose areas with slopes of under 10% (4 to 8 % is best). Avoid slopes greater than 12%.