Native Pennsylvania Plants

(listed flowers & shrubs also attract butterflies)

Plant	Form	Sun/ Shade	Moisture	Color	Height
Butterfly weed *Asclepias tuberosa*	Flower	FS/PS	dry to moist	orange	1-3 ft
Swamp milkweed *Asclepias incarnata*	Flower	FS/PS	moist to wet	pink	4-6 ft
Cardinal Flower *Lobelia cardinalis*	Flower	FS/PS/S	moist to wet	red	2-4 ft
Great blue Lobelia *Lobelia siphilitica*	Flower	FS/PS/S	moist to wet	blue	1-5 ft
Bee balm *Monarda didyma*	Flower	FS/PS/S	moist to wet	red	2-5 ft
Blazing star *Liatris spicata*	Flower	FS/PS	dry to moist	purple	1-6.5 ft
Blue flag *Iris versicolor*	Flower	FS/PS	moist to wet	purple	3 ft
Tussock sedge *Carex stricta*	Sedge	FS	moist to wet	green	1-3.5 ft
Black chokeberry *Photinia melanocarpa*	Shrub	FS/PS/S	dry to wet	white flower/ black fruit	3-6 ft
Spicebush *Lindera benzoin*	Shrub	PS/S	moist to wet	red fruit/ yellow-fall	6.5-16 ft

FS - full sun
PS - partial shade
S - shade

For More Information, Contact:
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Please send photos of your rain garden to Paul!

Sponsored by:

Schuylkill Action Network

Philadelphia Water Department

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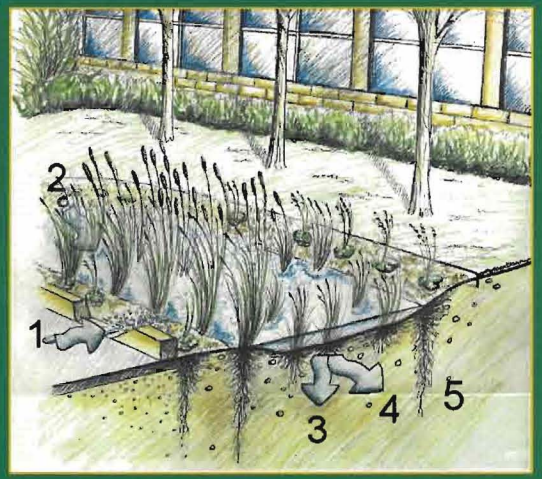
How Do Rain Gardens Work?

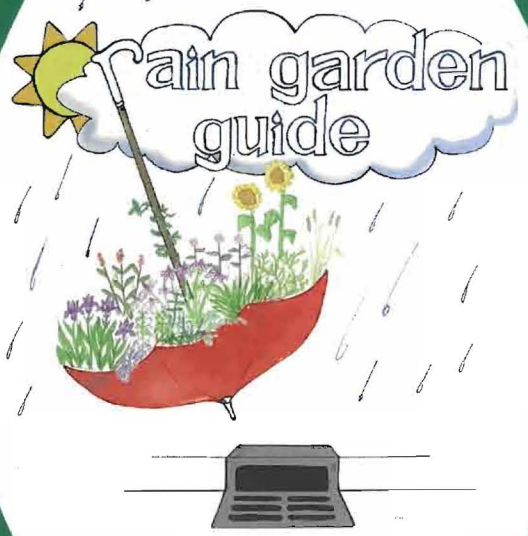


1) Rain Runoff from Parking Lot Enters Garden
2) Runoff from Roof Downspout Enters Garden
3) Rain Soaks Into Ground
4) Runoff Slowed & Reduced
5) Deep Roots Loosen Soil

Prepared by:

URS

Pennsylvania



Provided by:

Wissahickon Watershed Partnership

www.phillyriverinfo.org

What Is A Rain Garden?

A rain garden is a planted shallow depression designed to catch and filter rainfall runoff. The garden captures rain from a downspout or a driveway. The water sinks into the ground, aided by deep rooted plants that like wet and dry conditions.

A residential rain garden should dry out between rains and should only hold water for 24 hrs. This timeframe prevents standing water that could create mosquito habitat.

Why Build a Rain Garden?

- Slow down stormwater runoff and filter pollution
- Protect rivers and streams
- Create habitat for birds and butterflies

Step 1 – Find the Right Location

- Locate garden near downspouts and/or in a low spot where water collects.
- Keep away from septic field.
- Locate garden at least 30' from a house with a basement and 10' if there is no basement.
- Avoid utilities. Call PA One-Call before you dig (800-242-1776) to determine utility locations.

Step 2 – Size the Rain Garden

- The goal is to:1) capture and recharge into the ground 1" of rain falling on your garden's drainage area (e.g. the roof top or paved area that feeds the garden), and 2) have the garden drain in 24 hrs.
- Size is not a critical factor for a residential rain garden. Capturing any rain water that would otherwise drain onto our streets, down our pipes and out to our creeks is helping the environment. Rain gardens are typically 100 square-feet or less in size and 6-8" deep.
- Perform an infiltration test (see Photo 1) to determine depth of rain garden: 1) dig a hole (8" deep and 8" wide), 2) fill it with water and put a popsicle stick at the top level of the water. 3) Measure how far it drains down after a few hours (ideally 4 hours). 4) Calculate the depth of water that will drain out over 24 hrs. This is how deep your rain garden should be.

Photo 1

- Measure your drainage area (e.g. roof top, paved area, lawn). See Photo 2 example of rooftop area that drains to a downspout, connecting to a rain garden.
- Divide the drainage area by the depth of the rain garden to estimate the size (surface area) of the garden.

Photo 2

Step 2 Example:
Infiltration test determined 6" of water drained out of a hole in 24 hrs. So 6" is the depth of the rain garden. The roof top area that we are using to feed our rain garden is 10' x 50' = 500 sq-feet. To infiltrate the 1" storm event, we divide the drainage area by 6:

500 / 6 = 83 square-feet

The rain garden should be about 80-85 sq-ft in size and 6" deep.

Step 3 – Prepare the Garden Bed

- Dig out and level the bottom of the bed to the depth you determined in Step 2.
- Use the excess soil to build a berm (mound) at the low end of the garden (see Photo 3).
- If you have clay or compacted soil, over-dig the garden 12" below the calculated rain garden depth, removing some soil and replace with a mix of sand and compost. Till the mix back in with native soil.
- Run a path from the downspout to the garden using a grass swale, gravel, or plastic pipe/extension. Arrange stone decoratively at the inlet of water to the garden to slow the flow and prevent erosion.

Step 4 – Plant Selection

- Choose native plants that are attractive to you. Be creative! For example, you may want to select plants to attract birds and butterflies.
- A Plant List is provided, giving a small sample of the species you can choose.
- Identify your soil type (sand, silt, loam or clay) and how much sun your site gets for plant selection.
- Talk to your local nursery and encourage them to stock native Pennsylvania plant species.
- Place taller plants in the middle or back of the garden. Space them according to the mature size of the specific plant.
- Place drier species on the berm and perimeter of the garden, and place species that like it moist to wet in the interior of the garden.

Step 5 – Care & Maintenance

- Water plants regularly until they become established.
- Mulch with hardwood (do not use Cypress).
- Prune and remove dead vegetation in spring.
- Weed as you would any garden.
- Do not be afraid to move plants around if you think they would do better in drier or wetter parts of the garden.

Preparing the planting area next to a roof drain downspout.

Photo 3

Photo 4

Water heading from downspout to a newly planted rain garden.

Photo 5

Rain garden with curbside drainage.

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