



STORMWATER TOOL Rain Garden

Rain Check Program

The Philadelphia Water Department (PWD) believes that every homeowner can make a difference in transforming Philadelphia into a green city with clean water.

Rain Check gives homeowners an opportunity to reduce pollution that would otherwise end up in our creeks and rivers and beautify their properties at the same time.

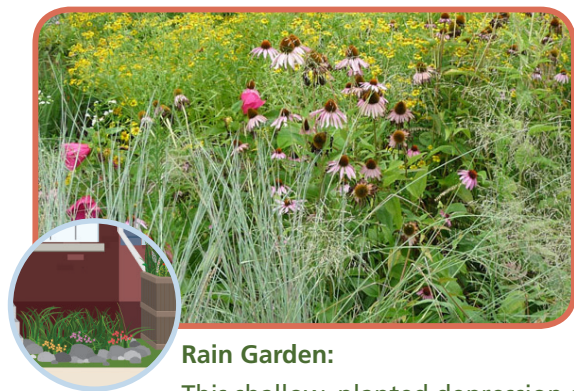
PWD will help Rain Check participants install stormwater tools at a greatly reduced price.

What is a Rain Garden?

- A rain garden is a shallow, planted depression that absorbs the water that flows from your roof or any hard surface, allowing it to drain directly into the soil.
- Rain gardens are one of the simplest and most effective ways to “green” your landscape and manage stormwater.
- A rain garden will reduce stormwater pollution, replenish the groundwater supply and provide a self-irrigating landscape!

Benefits of a Rain Garden

- Create an attractive and unique landscape feature.
- Slow down stormwater runoff and filter pollution.
- Prevent runoff from polluting our local rivers and streams.
- Create habitat for birds and butterflies.



Rain Garden:

This shallow, planted depression absorbs the water that flows from a roof or patio.

Caring for Your Rain Garden

- Water the rain garden frequently (once per week for the first month or so). Once established, it should need little to no additional watering.
- Weed and prune 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.
- Do not plant edible food in a rain garden. Stormwater running into the garden may carry dirt and debris not suitable for edible plants. In addition, urban soils should be tested before being used for growing edibles.

Keep in Mind

- Rain gardens should be sloped away from the home and neighboring properties.
- They should also be located approximately 10 ft. from the foundation of the home and cannot be located above underground utilities.
- Soil conditions must be appropriate; the assessor will complete an infiltration test to determine this.
- Plant selection options will vary based on the location of the garden and the availability of plant species.
- A rain garden could be planted following pavement removal if the assessor can verify the soil conditions.

Common Rain Garden Plants

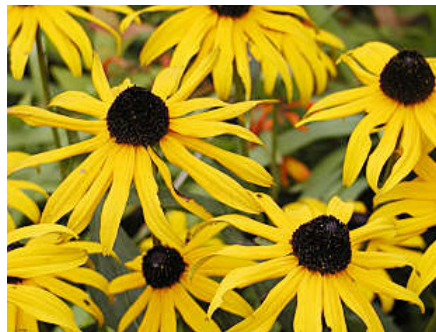
For a more complete list of sample rain garden plants, visit: <http://raingardenalliance.org/planting/plantlist>



Brown-Eyed Susan

(*Rudbeckia triloba*)

Image: Illinois Wildflowers



Goldsturm

(*Rudbeckia fulgida*)

Image: Falling Water Designs



Switchgrass

(*Panicum virgatum*)

Image: Nature for Cities

What Will It Cost?

If you choose a rain garden, a landscaping contractor will visit your home to provide an estimate based on your property.

Most gardens cost about \$17/sq. ft. PWD will pay \$16 / sq. ft. up to a maximum of \$2,000.

The homeowner pays the remainder of the total cost.



Small-reed or Reedgrass

(*Calamagrostis*)

Image: Environmental Management Landscape, Inc, Chris Matson, 2010



Little Joe Pye Weed

(*Eupatorium dubium*)

Image: The Hiker's Notebook (Blog) William Needham

Next Steps:

Please contact PHS to order your rain garden:
RainCheck@pennhort.org or (215) 988-1698



STORMWATER TOOL

Downspout Planter

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WATER

phillywatersheds.org/raincheck

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What is a Downspout Planter?

- A downspout planter is a decorative garden planter filled with gravel, soil and vegetation that uses rainfall from the roof to irrigate the plants.
- Downspout planters are connected to the roof downspout to let water flow in and hold it temporarily before entering the sewer system.

Benefits of a Downspout Planter

- A downspout planter is an attractive green addition to a yard or patio and comes with its own rain-driven irrigation system. Downspout planters filter sediment and pollutants, reducing the impact of stormwater pollution on our waterways.

Caring for Your Downspout Planter

- Water the plants (once per week for the first month or so, but water more if the soil in the planter seems dry).
- Water vegetation during extended droughts too; otherwise the downspout planter should not require any watering. A good rule of thumb is if plants appear to be wilting then water as you would any planter.
- Keep the overflow pipe (view image) free and clear of debris, checking it periodically after rainstorms.
- Keep the downspout connection (or diverter) connected and directed to the planter.
- Do not plant edible food in a downspout planter. Stormwater running into the planter may carry dirt and debris not suitable for edible plants.

What Will It Cost?

Downspout Planter

Homeowner pays: \$100

PWD pays: \$875

Total cost: \$975



Downspout Planter: Connected to the roof downspout, these planters slow water down before entering the sewer while irrigating plants and removing pollutants.

Understanding your Downspout Planter



Downspout Connection

Overflow pipe

Riser

Underdrain

Next Steps:

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Keep an Eye on Your Downspout Planter

- Check the downspout planter after rainstorms to make sure that the water is soaking into the soil and not overflowing on the surface. If water is not draining, disconnect the hose from the underdrain, remove underdrain cap and flush the pipe with a garden hose.
- Check the downspout connection into the downspout planter to ensure that nothing is dislodged following an intense storm.
- Inspect plants to evaluate health and replace if necessary.
- Prune and remove dead material from your downspout planter as you would with your garden. Ensure that floatable materials do not clog the overflow device.
- Maintain your roof gutters and downspouts to ensure that they function properly and convey stormwater to your green tool.

Consider This!

- If you disconnect your downspout planter, ensure that the downspout is safely reconnected to the sewer and not draining to your property, your neighbor’s property or the sidewalk.
- After your downspout planter has weathered a season, consider staining it to a color you like.

Plants

There are three native plant mixes available. These plants were chosen based on their ability to live in dry and wet conditions, their stormwater management potential, and sun conditions. Plant selection will vary depending on the light requirements, season and availability. Unfortunately, we cannot accommodate specific requests, but all plants are complementary.



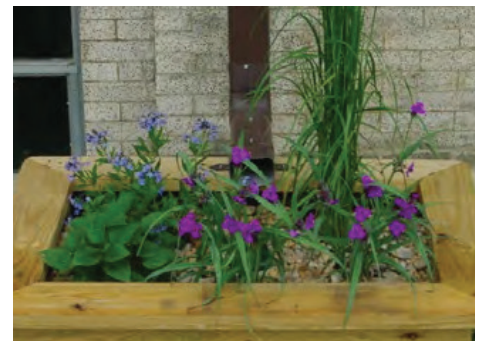
Full Sun

- Smooth aster (perennial wildflower)
- Bee balm (perennial wildflower)
- Red switch grass (grass)



Part Shade

- Feather red grass (grass)
- Red switch grass (grass)
- Black-eyed susan (perennial wildflower)



Full Shade

- Blue star (perennial wildflower)
- Feather red grass (grass)
- Black-eyed susan (perennial wildflower)
- Spiderwort (perennial wildflower)

Sizes

Rain Check downspout planters come in four standard sizes. The planters include a skirt which conceals blocks used to elevate the box and decorative trim around the top.

w x l
1.5' x 3'
1.5' x 4'

storage volume:
18 gallons
24 gallons

w x l
2' x 2'
2' x 4'

storage volume:
16 gallons
32 gallons

Note:

These measurements do not include the trim around the top of the planter which adds approximately 2" to each side of the box. In addition, all boxes are 2' high. The final height of the box will be greater once it is placed on blocks.



The Rain Check Program is funded by the Philadelphia Water Department and managed by the Pennsylvania Horticultural Society in partnership with the Sustainable Business Network.



STORMWATER TOOL Permeable Paving

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What is Permeable Paving?

Permeable paving describes hard surfaces that allow rainfall to seep into the ground, unlike traditional paved surfaces. Porous pavers such as stones, bricks or a special mix of concrete or asphalt can be used to redesign areas such as driveways, walkways and patios to help manage stormwater runoff.

Benefits of Permeable Paving

- Permeable paving performs just as well as a conventional paved surface and is similar in cost.
- Permeable paving mimics the way that natural land absorbs water and allows water to filter through the soil and recharge groundwater.
- Permeable pavers can help to reduce icy driveways and walkways.
- Pavers are an attractive alternative to concrete and asphalt that will provide a unique look for your yard and home.



Permeable Pavers: Specially designed paving stones, bricks, or pavers that allow water to soak into the ground below.

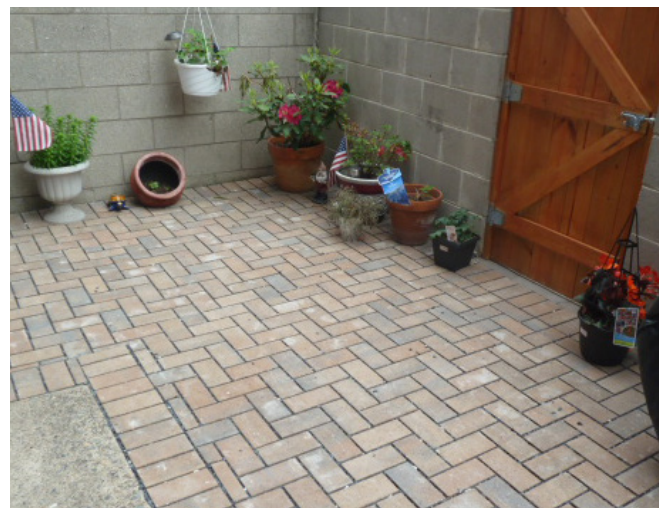
What Will It Cost?

If you choose permeable pavers, a masonry contractor will visit your home to provide an estimate.

Permeable pavers costs about \$30 - \$35/ sq. ft.
PWD will pay \$15/ sq. ft. up to a maximum of \$2,000.
The homeowner pays the remainder of the total cost.

Next Steps:

Please contact PHS to order your permeable paving:
RainCheck@pennhort.org or (215) 988-1698



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STORMWATER TOOL De-paving

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What is De-paving?

- De-paving is an opportunity to turn your paved yard or lot into a pervious surface that absorbs stormwater.
- De-paved areas can be turned into a lawn, area with clean stone, rain garden or other landscaping.
- In Philadelphia, many homes contain yards that are entirely covered with concrete, making them great candidates for de-paving.

Benefits of a De-paving Your Yard

- De-paving clears space for lush and attractive yards that filter pollutants from our water and air and provide numerous ecological benefits.
- By removing an impervious surface, such as concrete or asphalt, water can be absorbed into the ground and recharge groundwater aquifers.
- Water absorbed by the ground is less likely to end up in storm drains and transport pollution to our waterways.



De-Paving: The removal of concrete, asphalt or other impervious surfaces can provide space for a lawn, rain garden, clean stone or other landscaping.

Tips on Caring for Your De-paved Area

- Before you de-pave, decide what you would like as a follow-up treatment. This could include a rain garden, grass seed, clean stone or landscaping. Otherwise, the loose soil from the de-paved area can end up in the stormdrain and pollute our creeks and rivers.
- Do not plant edible food in a de-paved area. Stormwater running into the area may carry dirt and debris not suitable for edible plants. In addition, urban soils should be tested before being used for growing edibles.

Next Steps:

Please contact PHS to get your depaving project started:

RainCheck@pennhort.org or (215) 988-1698

What Will It Cost?

If you choose de-paving, a masonry contractor will visit your home to provide an estimate.

De-paving costs vary depending on what you choose to replace the existing surface.

Removal of the existing surface costs about \$15/ sq. ft.

PWD will pay \$8/ sq. ft. up to a maximum of \$2,000.

The homeowner pays the remainder of the total cost.



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STORMWATER TOOL Rain Barrel

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Rain Barrel Program

The Philadelphia Water Department (PWD) believes that every homeowner can make a difference in transforming Philadelphia into a greener city with clean water.

PWD's Rain Barrel program gives homeowners an opportunity to reduce pollution that would otherwise end up in our creeks and rivers. Rain barrels are installed by our partner, the Pennsylvania Horticultural Society, for anyone who attends our rain barrel workshops.

What is a Rain Barrel?

- A rain barrel is a storage container connected to a downspout to capture stormwater runoff from the roof.
- Rain barrels usually consist of a plastic storage container, a system that diverts water into the barrel, and a water spigot to which a garden hose can attach or a watering-can can be filled.
- PWD rain barrels are 55 gallon, blue, recycled, food-grade barrels that measure approximately 22.5" diameter and 36.5" height.
- Our rain barrels are completely sealed so there is no need to worry about mosquitoes.

Benefits of a Rain Barrel

- Rain water can be reused for watering gardens, lawns and more.
- Philadelphia homeowners can save money that would otherwise be spent on tap water.
- By storing rain water during rain events, there is a decreased impact of stormwater runoff on our streams and rivers, making them healthier waterways.
- The rain barrel and installation are FREE!

Caring for Your Rain Barrel

- Be sure to empty your rain barrel after each rainstorm (full rain barrels can't capture stormwater!)
- In the winter, you should completely drain your barrel and detach it from the downspout. A winter plug is provided to seal the hole in your downspout.

What Will It Cost?

Rain barrels and the installation are free!

Sign up!

Sign up for a free Rain Check workshop:
www.phillywatersheds.org/raincheck



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