## Rain Gardens: Digging Deeper

***These gardens aren't just another pretty garden bed, they enhance your property, your community and our environment.***

*By Willistown Conservation Trust Director of Stewardship Andrew Kirkpatrick and Communications Specialist Monica McQuail (photos by Ms. McQuail)*

Rain gardens are popping up everywhere. You'll find them on college campuses and office parks, in mall parking lots, along city streets and multi-use trails. They've grown in popularity over the last several years in response to the many problems stormwater causes in the landscape.

When it rains — especially heavy rains — we often see flooding, erosion and pollution from stormwater runoff. Just the first inch of rain during a storm does the most harm.

The good news is local use of rain gardens (even on your own property!) can help reduce flooding, erosion and pollution over a broad region. These magical gardens can also provide important habitat for our declining native birds and pollinators, among other species.

Here's how.

### THE BENEFITS OF A RAIN GARDEN

First, what is a rain garden? A rain garden — also called Bioretention — is an excavated, shallow depression that is planted with native plant species that treat and capture runoff. It's not just another garden bed, and it doesn't need to be limited to perennial wildflowers and grasses. Shrubs and trees can also be used in rain gardens to achieve increased absorption, retention and beauty.

Rain gardens are designed to intercept water and help return it slowly back into the ground while reducing the amount of pollution reaching creeks and streams by up to 30%. They add municipal benefits, conserve water and create beneficial habitat for birds and butterflies. And the beauty of a rain garden is that it can be planted in urban and industrials settings, along highways, in large parking lots and in your own backyard.

A rain garden on your property provides many benefits, including:

- Filtering pollutants,
- Conserving water,
- Removing standing water in your yard,
- Reducing mosquito breeding,
- Increasing beneficial insects that eat pests,
- Reducing potential of home flooding,
- Creating habitat for birds and butterflies,
- Surviving drought seasons,
- Reducing garden maintenance,
- And adding beauty to your property!

### WHY DO WE NEED RAIN GARDENS?

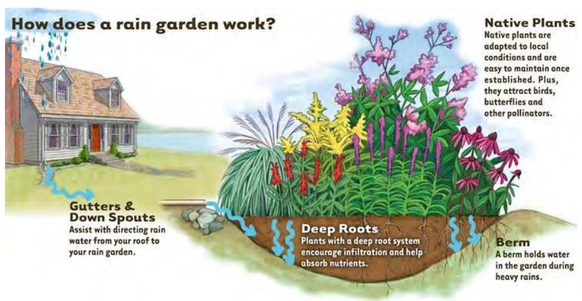
With growing development and expanding urban communities replacing forests and agricultural land, impervious surfaces have grown more prevalent and problematic. Impervious surfaces such as roadways, driveways and sidewalks increase flooding, because when it rains, the water has nowhere to drain. We've all seen how quickly the drains on our roadways get backed up during heavy rainfall.

Known as stormwater runoff, this rainfall gets carried through our drains, and it feeds directly into our local waterways, overwhelming our municipal water systems during flooding events. Along the way, this water picks up pollutants like pesticides and fertilizers from our lawns, road salts, heavy metals from cars, and sediment — all of which impact the water quality of our local waterways.

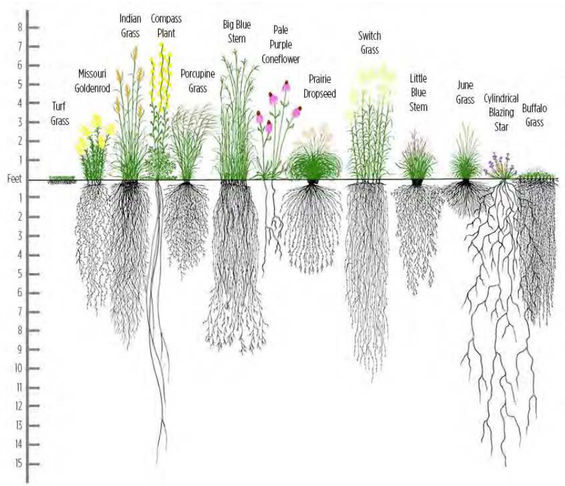
As storm events increase in intensity and frequency in our area due to climate change, we need to act now to help mitigate flooding. An individual rain garden may seem insignificant, but if we collectively plant rain gardens — say for instance, every house in your neighborhood plants a small rain garden — we can see substantial environmental benefits.

### PLANT A GARDEN FOR THE SAKE OF OUR NATIVE WILDLIFE

The plants used in a rain garden are "deep-rooted native plants," because these species are especially helpful in filtering water. As another benefit, these plants also attract birds, pollinators and other wildlife, providing food and shelter for them. Native plants support a variety






of birds — both local and migratory species — as well as beneficial insects, butterflies and bees.

The Monarch butterfly was added to the endangered species list this year, North America's bird populations have declined by more than 3 billion birds — more than a third — in the past 50 years, and bee colony loss continues to be a major concern. We have learned how lawns do little to nothing to support biodiversity, and as we watch bird species, bees and butterflies die off in our lifetime, it is more important now than ever to provide beneficial habitat for them.

Using a rain garden to create an ecological landscape is imperative for these species' survival. And a rain garden will attract different species — like turtles, frogs and toads — than a meadow or edge garden, so if you plant a variety of native gardens, you can enjoy an oasis of wildlife in your own backyard!

### SEE A RAIN GARDEN

Willistown Conservation Trust's Rushton Conservation Center (915 Delchester Road, Newtown Square) driveway wraps around the Rushton Rain Garden, planted in 2018. Designed by Johnathan Alderson Landscape Architects, this garden features a variety of perennials, grasses and woody plants carefully selected for their ability to withstand wet soils to help mitigate the stormwater runoff created by the paved driveway.

Specific plant species planted in this rain garden include sweetbay magnolia and sweet pepperbush, along with a variety of wildflowers and grasses that were planted as plugs and seed. Swamp milkweed, butterfly weed, purple coneflower, bee balm, beardtongue, mountain mint and asters fill the basin with seasonal color and attract pollinators all summer long.

The circular driveway around the rain garden is pitched inwards to drain runoff during storms. This rain garden has a deep basin with a drain in the center to collect excess water during heavy downpours. It carries the water downhill to a meadow where it will also slowly filter back into the ground.

We hope that you will begin to see more rain gardens popping up in your community, in your neighborhood and your backyard! The best time to start planning your rain garden is right now, and you can read more about that process in Bobbi Tower's article (The Malvern Gardener).