

# Rain Garden Expansion Kit

## 2022 Owner's Manual

Five native species that stand alone or can be added to a Sunny Basic Kit, totaling ten species to create a beautiful rain garden to reduce stormwater flooding downstream. These flowers bloom from Spring to Fall to provide beauty in your yard and critical habitat for pollinators.

### Rain Garden Expansion Kit Species



**Blue Flag Iris**



**Spotted Joe-Pye Weed**



*Photo Credit: Kim Smith*

**Seaside Goldenrod**



**Pennsylvania Sedge**



*Photo Credit: North Creek Nurseries*

**Switchgrass**

## The Sunny Basic Kit

Pairs well with the Rain Garden Expansion Kit Sunny Basic Kit which includes:



**Golden Alexander**



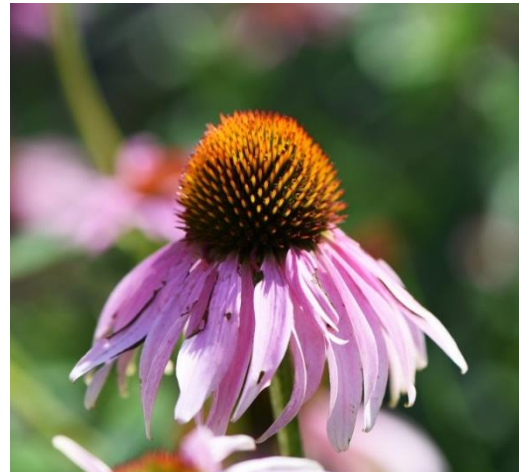
**Swamp Milkweed**



**Virginia Mountain Mint**



**New York Aster**



**Purple Coneflower**




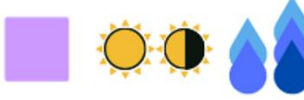

# Rain Garden Expansion Kit Contents

Your 25-plant plug kit includes five species that thrive in sunny gardens wet to drier conditions.

The kit includes:

- Blue flag iris, *Iris versicolor*, 5 plugs
- Spotted Joe-Pye Weed, *Eutrochium maculatum*, 5 plugs
- Seaside goldenrod, *Solidago sempervirens*, 5 plugs
- Pennsylvania sedge. *Carex pensylvanica*, 5 plugs
- Switchgrass, *Panicum virgatum*, 5 plugs

**Important: Once you get home, check to see if your plugs need water. Keep their soil moist to the touch (but not soaked) until you are able to plant them in the ground. For best results, try and plant as soon after purchase as possible.**

<p><b>Blue flag iris</b></p>  <p>May - Jun 2' - 3'</p> <p>Color Light Moisture Season Height</p>	<p><b>Pennsylvania sedge</b></p>  <p>May - Jun ½' - 1'</p> <p>Color Light Moisture Season Height</p>
<p><b>Switchgrass</b></p>  <p>July 3' - 4'</p> <p>Color Light Moisture Season Height</p>	<p><b>Spotted joe-pye weed</b></p>  <p>Jul - Sept 3' - 5'</p> <p>Color Light Moisture Season Height</p>
<p><b>Seaside goldenrod</b></p>  <p>Aug - Nov 2' - 6'</p> <p>Color Light Moisture Season Height</p>	

# Description and Requirements: Sunny Basic and Rain Garden

## Expansion Kits

Consider your garden bed conditions when designing your garden. For your garden to be most successful, your garden bed should meet your plants sunlight and moisture needs. Each plant's flower color and flowering time should be dispersed throughout the garden so that your garden is spectacular all year round. Lastly, taller plants should be placed towards the back of the garden so that they do not block the shorter plants from view.


### Golden Alexander

			May - Jun	1'-2.5'
Color	Light	Moisture	Season	Height

### Pennsylvania sedge

			May - Jun	1/2' - 1'
Color	Light	Moisture	Season	Height

### Blue flag iris

			May - Jun	2' - 3'
Color	Light	Moisture	Season	Height




### Switchgrass

			July	3'-4'
Color	Light	Moisture	Season	Height


### Virginia mountain mint

			Jul - Sept	2' - 3'
Color	Light	Moisture	Season	Height

### Spotted joe-pye weed

			Jul - Sept	3' - 5'
Color	Light	Moisture	Season	Height

### Swamp milkweed

			July - Aug	3' - 4'
Color	Light	Moisture	Season	Height

### Purple coneflower

			Jul - Sept	2' - 4'
Color	Light	Moisture	Season	Height

### New York aster

			Aug - Oct	3' - 5'
Color	Light	Moisture	Season	Height

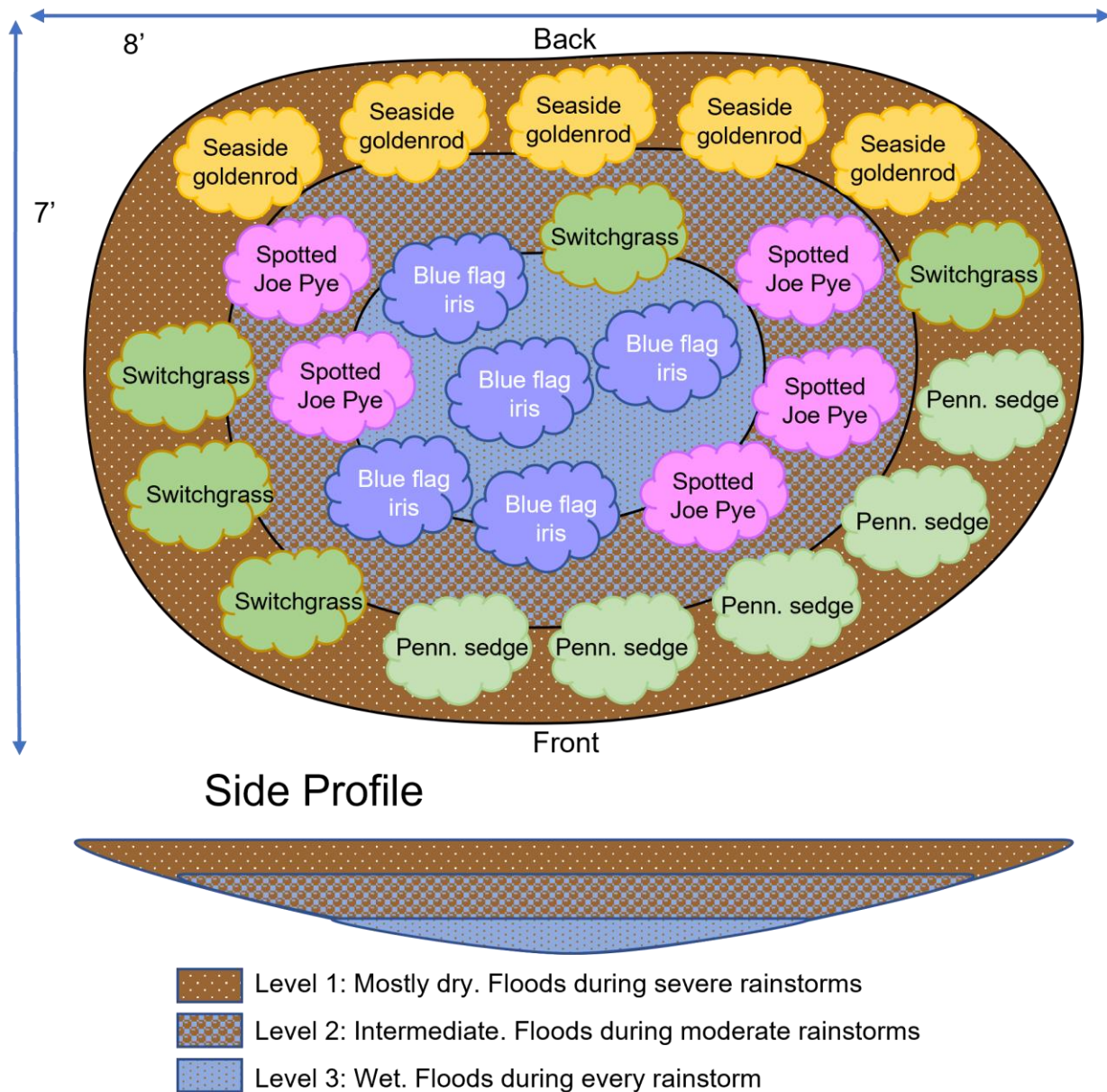
### Seaside goldenrod

			Aug - Nov	2' - 6'
Color	Light	Moisture	Season	Height

# Designing your garden

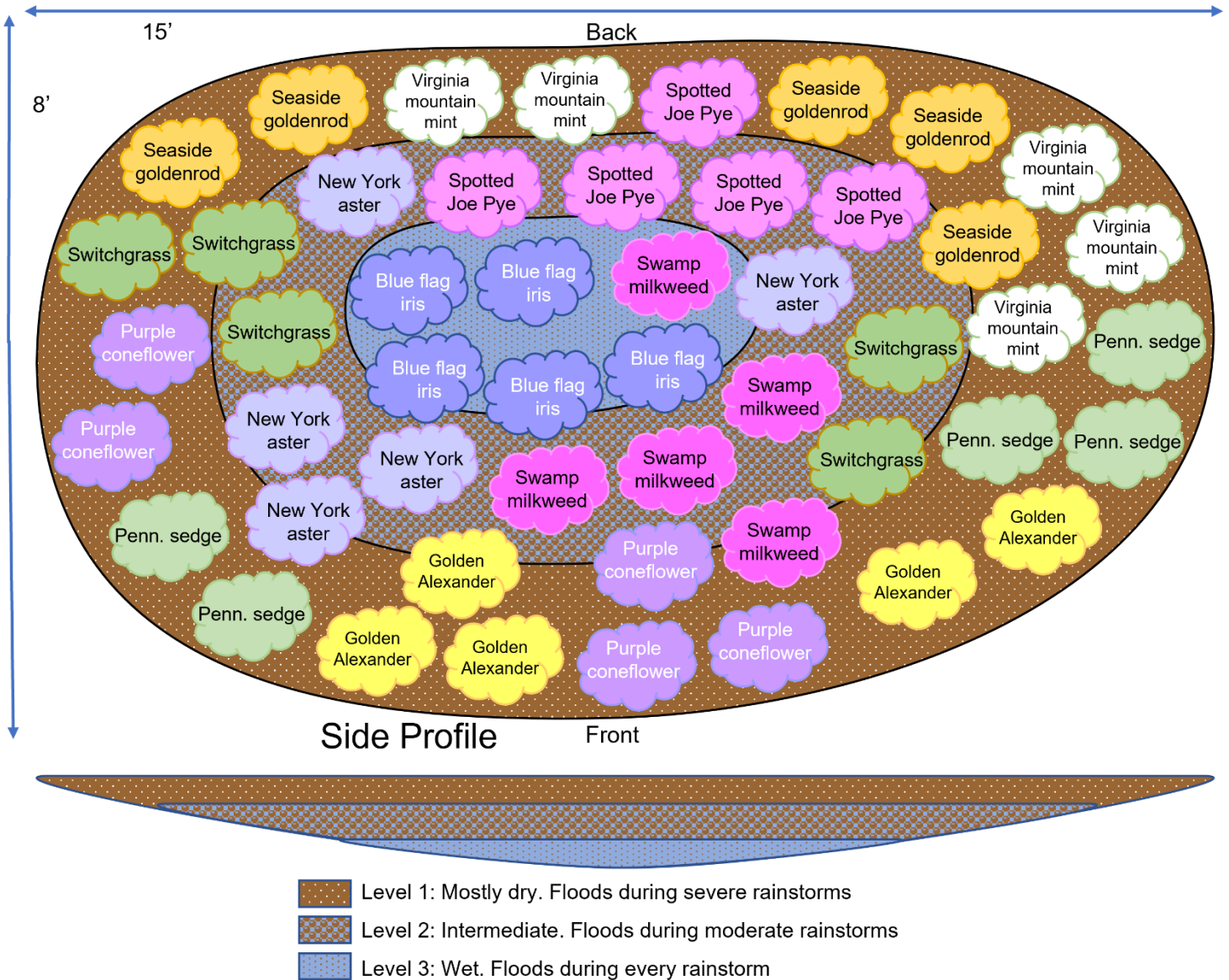
## Sample Design: Rain Garden Expansion

This design can be used as is or easily modified to fit your chosen space and your gardening goals.



# Sample Design: Sunny Basic Kit and Rain Garden Expansion Kit

This ten species design incorporates both the plants in the Sunny Basic Kit and the Sunny Expansion Kit. The combination provides more variety and more continuous bloom. Species are placed to fit the moisture profile across the rain garden from edge to floor to edge. Within the constraints of the moisture profile, this design can be easily modified to fit your chosen space and your gardening goals.



## Design Considerations

### *Your Landscaping Style*

These plants can fit any style from a formal garden to a naturalistic garden like this design to a wild garden with clumps. Pollinators will be equally happy with any of these.

### *Your Rain Garden*

This design can be easily altered to fit a deeper, wider, or curved garden bed. These designs use moderate 18-inch center-to-center plant spacings to easily fill a 100 or 50 square foot area. The goal is to have plants pressing shoulder to shoulder for easier maintenance. Tightly spaced plants create a “green mulch” reducing the opportunity for weeds to sprout so that annual mulching is no longer required. You can choose to plant on a tighter spacing. A larger spacing will require more maintenance and mulching to manage weeds.

Plants in the low part of the basin need to be those that tolerate wet feet during the rainy season. The plants on the higher edges of the basin need to be able to tolerate some dryness.

### *Add On!*

These species can be planted alone or with our Sunny Basic Kit. Rain gardens work well with native shrubs as well. Pick and place plants to suit the moisture profile of the basin.

## Site Preparation

### *Know your sun, moisture, and soil conditions*

The plants in the Rain Garden Expansion Kit need a range of sun conditions, from full sun for seaside goldenrod to part-sun for Pennsylvania sedge.

Rain gardens encompass a range of moisture conditions from the bottom of the basin to the top edges. You may need to water your plants during dry summer periods during the first season, after that they should only need watered during drought. Once their roots are established, they will generally not suffer permanent damage even without watering. The plants selected for level 3 (lowest area) can withstand standing water.

These native plants are selected for the clay-silt-loam soils typical for our piedmont or highlands area. Depending on how rapidly your site drains, rain gardens work best when soil is amended with additional organic material to slow rapid drainage.

### *Prepare the bed*

If planting in a prepared basin, remove grass and any other unwanted plants that may compete with your new native garden while establishing. Minimize soil disturbance. Do not over dig unless amending the soil.

Great rain garden resources can be found here [Rain Garden Manual of New Jersey](#)

### *To prepare a new native plant bed replacing previous plantings:*

Sheet mulching is a great way to start! It is a back-saving “no-dig” strategy that kills unwanted weeds and grass by blocking out sunlight, allowing everything to die and decompose, minimizing soil disturbance and stirring up the weed seed bank.

- Mow the area you’d like to transform. Use a garden hose or a length of rope to create the garden outline.
- Cover the area with tapeless clean cardboard or 5 to 8 sheets of newspaper (don’t use glossy pages.) Overlap the edges to prevent gaps so that the turf is solidly covered. Wet down as you go.
- Cover cardboard with 3-4” of composted mulch. No soil amendments, no fertilizer. Native plants grow best in simple soils.
- Poke many small holes through the cardboard to maintain rainwater infiltration.

During spring and summer, this will take at least a month, usually two, to kill enough weeds and turf. Dig spot planting holes straight through to plant plugs.

Follow this link for more information [The Lasagna Method \(Sheet Mulching\)](#)

### *If not planting immediately*

- Keep plugs in a sheltered spot with enough sun and protect from frost/wind.
- Keep them moist but do not over-watered.
- Trim plants back to 6-12” and pinch off flowers if they will not be planted for more than a month. With proper care, landscape plugs should stay healthy for many weeks.

## Planting your plugs

- The only tool you need is a garden knife, trowel, or lightweight one hand pick.
- Extract each plug gently from its socket. Squeeze the sides to loosen. Push up from the bottom or use a narrow spatula to ease the plug out. Avoid pulling on the plant stem!
- Lay out where you want to place each plug. Dig a hole large enough for the plug.
- Plant so the top of the plug is even with the top of the soil. Tamp firmly.
- Water the plugs in.

## Pollinator Garden Management

Native plants are low maintenance, but every garden requires management.

Over-watering can be harmful. Through the first year, water them when the surface is dry. The second year and beyond you should only need to water during a drought.

Insects may chomp on plants, but these plants are larval host to butterflies and will recover.



Undesirable insects like Japanese beetles or aphids may become a problem. Find a caterpillar-safe way to mitigate the problem (Rutgers agricultural extension hotline can help). Even “organic” insecticides can kill desirable insects like Monarch caterpillars or butterflies.

- Healthy pollinator gardens host beneficial insects like lady bugs that eat pests.
- Mechanical removal, eg. spraying, wiping, or picking off large bugs works well.

Deer may also chomp some of these plants. Some species are more deer resistant than others.

- Plants are most palatable when young and don't have deep roots to recover.
- Organic deer repellents successfully repel deer and rabbits but require re-applications
- Cages and fences can be effective physical barriers but check local ordinances.
  - Deer fences should typically be 7-8' tall but for small enclosures 5' is effective.

If your soil is rich, tall-growing bushy plants may grow taller than wanted and can flop over. Avoid this by cutting back by  $\frac{1}{3}$ -  $\frac{1}{2}$  from Memorial Day to July 4<sup>th</sup> to shorten plant height.

A slightly messy garden is the best habitat!

- Leaving the stalks through the winter provides food and shelter for wildlife as well as visual interest
  - Cut the stalks in early spring after insects are active.
- Leave fall leaves to protect overwintering pupae and firefly eggs in your yard. The leaves decompose, enriching the soil, but ensure they are removed in the spring to protect basal rosettes.

Monitoring your garden as it changes. Remove invasive plants and weeds little and often. If species prove too prolific, divide and share. Diverse yards incorporate multiple layers and support more wildlife.

Experiment and have FUN!

# About each plant

## Blue Flag Iris



Flowers: May - June  
Light: Sun to Part-Shade  
Moisture: Moist to Wet  
Height: 2-2.5 ft

Description: A native Iris with bluish-purple blooms with pale centers above sword shaped blue-green leaves.

Can tolerate shallow standing water.

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## Spotted Joe Pye Weed



Flowers: July - Sept  
Light: Sun to Part-Shade  
Moisture: Moist to Wet  
Height: 3-5 ft

Description: Huge domed clusters of pinkish purplish fragrant flowers sit on tall sturdy stalks. Tolerant of intermittent flooding. Attracts a variety of bees and butterflies and is a good caterpillar host.

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## Seaside Goldenrod



Flowers: Aug - Nov  
Light: Full Sun  
Moisture: Dry to Moist  
Height: 2-6 ft

Description: Dense showy deep- yellow flowers late season. Salt tolerant. Valuable nectar-pollen source and caterpillar host plant. Seeds feed birds. Attracts predatory insects which prey on garden pests.

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## Pennsylvania Sedge



Flowers: May - June  
Light: Part-Sun to Shade  
Moisture: Dry to Moist  
Height: ½-1 ft

Description: Graceful no-mow turf alternative for low traffic areas, or “green mulch” ground cover in the garden. Works well as cover for a slope that receives water.

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## Switchgrass



Flowers: July  
Light: Sun to Part-Sun  
Moisture: Moist to Wet  
Height: 3-4 ft

Description: Clumping ornamental grass with columnar shape. Pink-tinged airy flowers give way to seed plumes in fall. Hosts moths and butterflies, including skippers. Birds enjoy the seeds.

## *Put your garden on the Map*

Each new native planting adds to the Pollinator Pathway that renews and extends wildlife habitat across our neighborhoods and region, whether it is one container on the patio or fully native backyard.

If you plant it, the pollinators and birds really will come!

Please take a minute to [Register Your Pollinator Garden](#) on the encourage the growing sustainable landscaping community.

To encourage your neighbors, we also recommend attractive explanatory garden signs.

You can purchase a Pollinator Pathway Garden sign through the plant sale.



map to

GSWA

### *If you have questions about your native plant garden*

Feel free to email us at [plantsale@greatswamp.org](mailto:plantsale@greatswamp.org) We want your pollinator garden to get a good start so it will provide you with years of enjoyment!



**Great Swamp Watershed Association**

The Passaic River **WATERKEEPER**® ALLIANCE Affiliate

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