### Suggested Rain Garden Plants

### Perennials

Goatsbeard (Aruncus Dioicus)
Astilbe (Astilbe Pumila)

Butterfly Weed (Asclepias Tuberosa)\*

Bergenia (Bergenia Cordifolia)

New England Aster (Aster Novea-Angliae)

Siberian Bugloss (Brunnera Macrophylla)

Sedge (Carex Spp.)

Turtlehead (Chelone Spp.)

Northern Sea Oats (Chasmantheum Latifolium)

Fairy Candles (Cimicifuga Racemosa)

Sweet Joe-Pye Weed (Eupatorium Purpureum)\*

Meadowsweet (Filipendula Spp.)

Cranesbill (Geranium Maculatum)

Coral Bells (Heuchera)

Daylily (Hemerocallis Spp.)

Swamp Rose Mallow (Hibiscus Moscheutos)

Siberian Iris (Iris Sibirica)

Blue Flag Iris (Iris Versicolor)

Blazing Star (Liatris Spicata)

Cardinal Flower (Lobelia Cardinalis)

Ostrich Fern (Matteuchia Struthiopteris)

Bee Balm (Monarda Didyma)

True Forget-Me-Not (Myosotis Scorpioides)

Evening Primrose (Oenthera Spp.)

Cinnamon Fern (Osmunda Cinnamomea)

Switchgrass(Panicum Virgatum)

Primrose (Primula Spp.)

Rodgersia (Rodgersia Pinnata)

Black-Eyed Susan (Rudbeckia Fulgida)

Goldenrod (Solidago Spp.)

Globe Flower (Trollius Europaeus)

\*Attractive to butterflies and/or Hummingbirds

### **Shrubs**

Japanese Beautyberry (Callicarpa japonica)
Witch-Hazel (Hamamelis virginiana)
Cranberrybush (Viburnum trilobum)
Mountain-laurel (Kalmia latfolia)
Red-osier Dogwood (Cornus sericea)
Inkberry (Ilex glabra)
Winterberry Holly (Ilex verticillata)

Wild Clematis (Clematis virginiana)



## Does a rain garden form a pond?

No. The rain water will soak in so the rain garden is dry between rainfalls.

### Are they a breeding ground for mosquitoes?

No. Mosquitoes need 7 to 12 days to lay and hatch eggs, and standing water in the rain garden will last for a few hours after most storms. Mosquitoes are more likely to lay eggs in bird baths, storm sewers, and lawns than in a sunny rain garden. Also rain gardens attract dragonflies, which eat mosquitoes!

### Do they require a lot of maintenance?

Rain gardens can be maintained with little effort after the plants are established. Some weeding and watering will be needed in the first two years and perhaps some thinning in the later years as the plants mature.

### Is a rain garden expensive?

It doesn't have to be. A family and a few friends can provide the labor. The main cost will be purchasing the plants, and even this cost can be minimized by using some native plants that might already exist in the yard or in a friend's yard.

For more information contact Putnam County

Soil & Water Conservation District,

841 Fair Street, Carmel, NY 10512

845-878-7918

Lauri.Taylor@putnamcountyny.gov www.putnamcountyny.com

# Why a Rain Garden?

Rain is natural; stormwater isn't. Government studies have shown that up to 70% of the pollution in our streams, rivers and lakes is carried there by storm water. Although most people never think about storm water, about half of the pollution that stormwater carries comes from things we do in our yards and gardens! Planting a rain garden may seem like a small thing, but if you calculate the amount of rain that runs off your roof, you would be very surprised. Rain is supposed to soak into the ground, but instead heads down the street to the storm drain, carrying pollution with it. Keeping rain where it falls, by putting it into a beautiful rain garden, is a natural solution. You not only get a lovely garden out of it, you have the added benefit of helping protect our rivers, streams and lakes from storm water pollution. You can be part of a beautiful solution!

# Everyone can help prevent stormwater pollution A cleaner Environment begins with you!

EPA's Phase II Stormwater Regulations require all Municipal Separate Storm Sewer Systems (MS4s) within an "urbanized area" to develop a Stormwater Management Plan. Putnam County, all six towns and the Village of Brewster are considered MS4's.

# STORMWATER POLLUTION Be Part of the Solution!



Putnam County's

Demonstration

Rain Garden

Putnam County Veteran's Memorial Park



### 1. Determine the best location:

Where does gravity take runoff water?

(Go with the flow from roof drains, patios, driveways, roadways)

Stay at least 10 feet away from the foundation of your house.

Don't install the garden over any part of a septic system.

Check the location of utilities.

A sunny or partially shaded area will work best.

### 2. Check the soils:

Soil types vary in how quickly they will absorb within 24-48 hours.

Dig a hole 8 inches wide, 12 inches deep and fill with water.

If it takes more than an hour for the water to drop an inch, your soil will need amendments.

Adding sand and compost will help.

Soils that have been compacted by heavy construction equipment need to be dug up and loosened to a depth of two feet or replaced with a mix of 50-60% sand, 20-30% topsoil, and 20-30% compost.

Rain gardens are NOT a solution for wet areas. The garden must have good drainage so that the water can soak in within 24-48 hours after rainfall

### 3. Determine the Size:

Recommendations vary, but a rule of thumb is to multiply square feet of roof/patio/driveway by Soil Factor = Area of Garden.

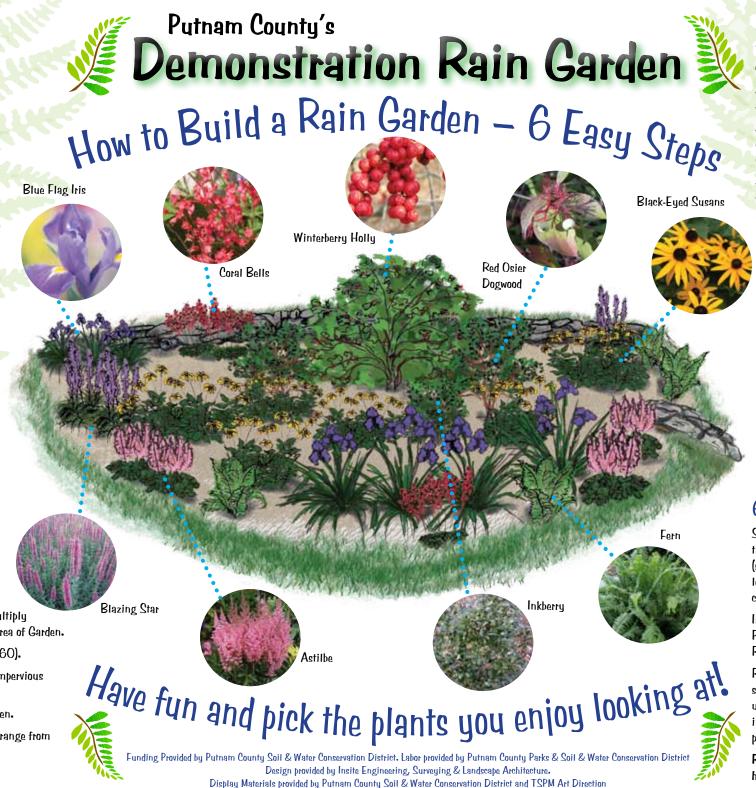
Soil factors: (sand - .20), (loam - .40), and (clay - .60).

Remember that different parts of your roof or other impervious surface drain to different down spouts/areas.

Estimate only the area that will drain into your garden.

Rain gardens for single family homes will typically range from 150-400 square feet (15'x10') to 20'x20'.

Most rain gardens are 4 to 8 inches deep.



### 4. Design the Layout:

The garden should be on a fairly level surface or a berm can be created on the downhill side so runoff can settle in the garden.

A 4-8 inch depression near the center will allow water retention and promote infiltration.

A length of garden hose or rope laid on the ground can help you define the area.

The garden can be any shape as long as water flows evenly across the garden.

The outlet should not be directly opposite the inlet.

### 5. Excavation/Construction:

Call before you dig (1-800-962-7962) or 811 or visit www.digsafelynewyork.com. Call 2 days before you dig to locate any underground utilities.

Remove the existing sod or plants.

Dig a 4-8 inch depression (or bowl) with a level bottom.

Build a small berm on the opposite side but not directly across from the water entry using soil excavated from the garden. Allow a low point for water that exceeds your depth to escape. Some rain gardens (compacted or clay soils) may require a subsurface drain pipe (consult a professional). Now is the time to add organic matter or other amendments to the soil if the soil needs it.

### 6. Plant Installation and Maintenance:

Select native, non-invasive species that do not object to having their roots wet for a few days and are tolerant of dry spells. (see plant list). Remember to select plants for your garden location (full sun or shade). Group the same plants together in clumps of at least 3 for the best effect.

Install and care for plants as you would in other new landscaping.

Plants will need to be watered until growth is established.

Remember, that all plants need water in drought conditions.

Rain gardens require weeding until plants are of sufficient size to out-compete weeds. To help keep weeding to a minimum, use a shredded hardwood mulch or pea gravel as a top dressing in your rain garden. It is also recommended to label your new plantings to avoid confusion with weeds.

Remember, native plants do not require fertilizer, herbicides or pesticides.