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Pollinator Gardens for the Homeowner

Mike Haberland
Rutgers Cooperative Extension

Lawns don’t Support Pollinators!

- **Over 40 million acres of lawn in U.S.**
- **Turf grasses are the single largest irrigated “crop” in the country.**
- **Lawns & non-native ornamental landscape plants support fewer pollinators, beneficial insects, songbirds, than native plants.**

simplicitymfg.com

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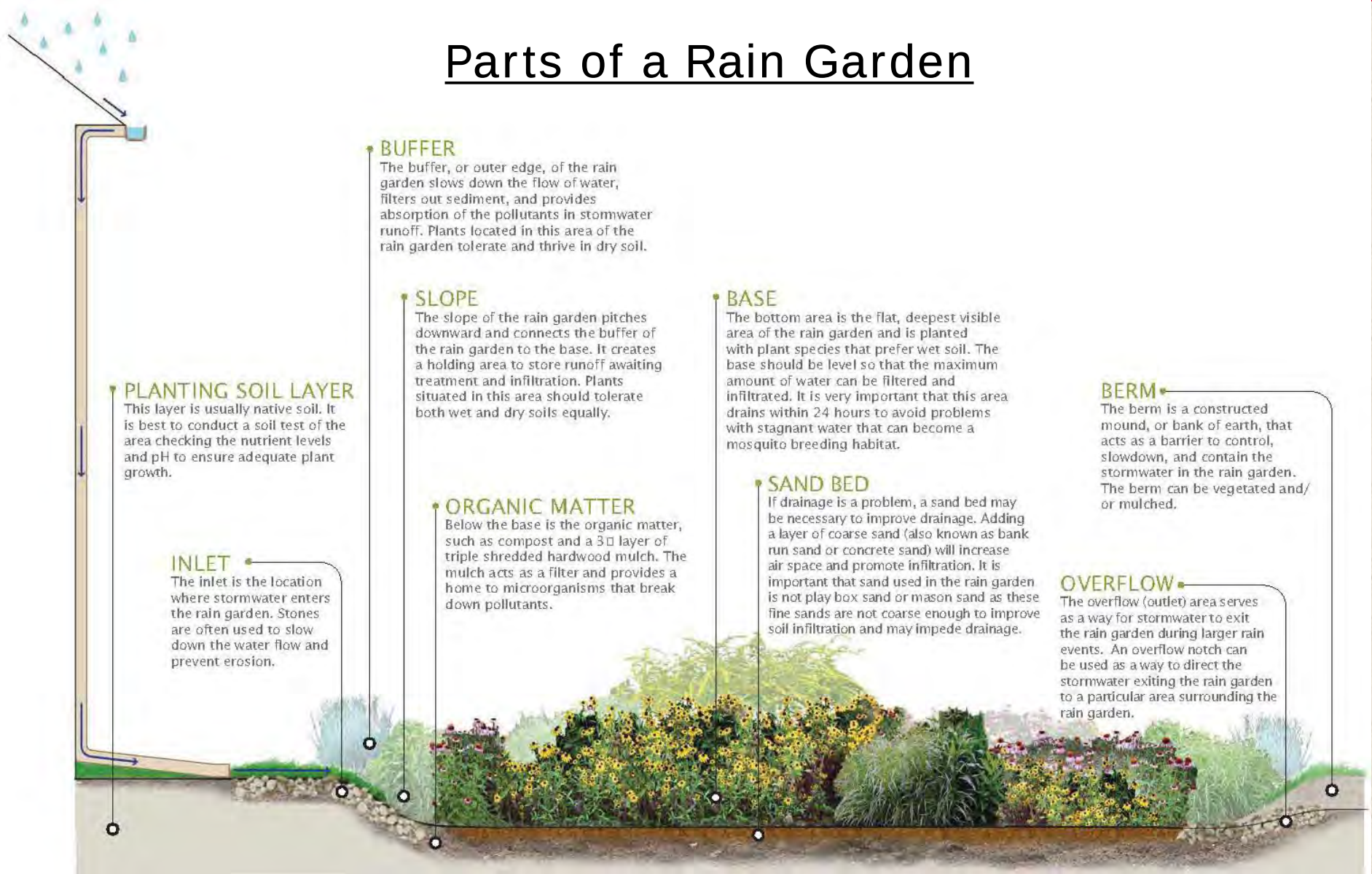
Rain & Pollinator Gardens Provide Habitat

Parts of a Rain Garden



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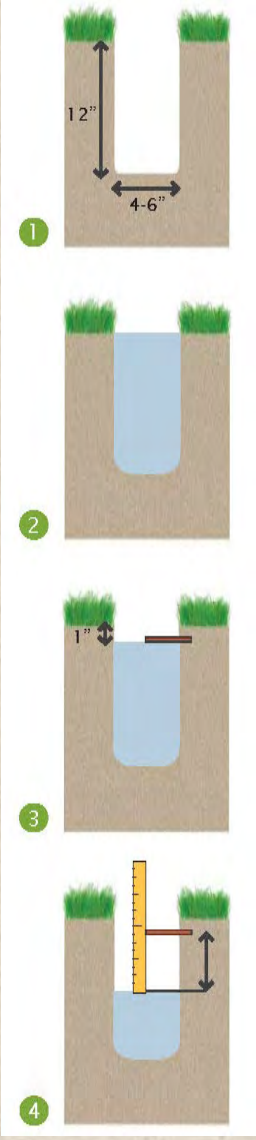
Rain Garden - Check Your Soil Drainage



Infiltration/Percolation Test

1. Dig a hole in the proposed rain garden site (12” deep, 4-6” wide).
2. Fill with water to saturate soil and then let stand until all the water has drained into the soil.
3. Once water has drained, refill the empty hole again with water so that the water level is about 1” from the top of the hole.
4. Check depth of water with a ruler every hour for at least 4 hours.
5. Calculate how many inches of water drained per hour.

Want at least ½” per hour percolation (1” if at a school).
Garden should drain within 24 hours.

Know your soil

What is your soil type?

- **Sandy – fast percolation**
- **Loamy – moderate percolation**
- **Clay – very slow percolation**

pH

Nutrients

Fertilizing – little or none needed when using native plants

Adding organic matter to improve soil

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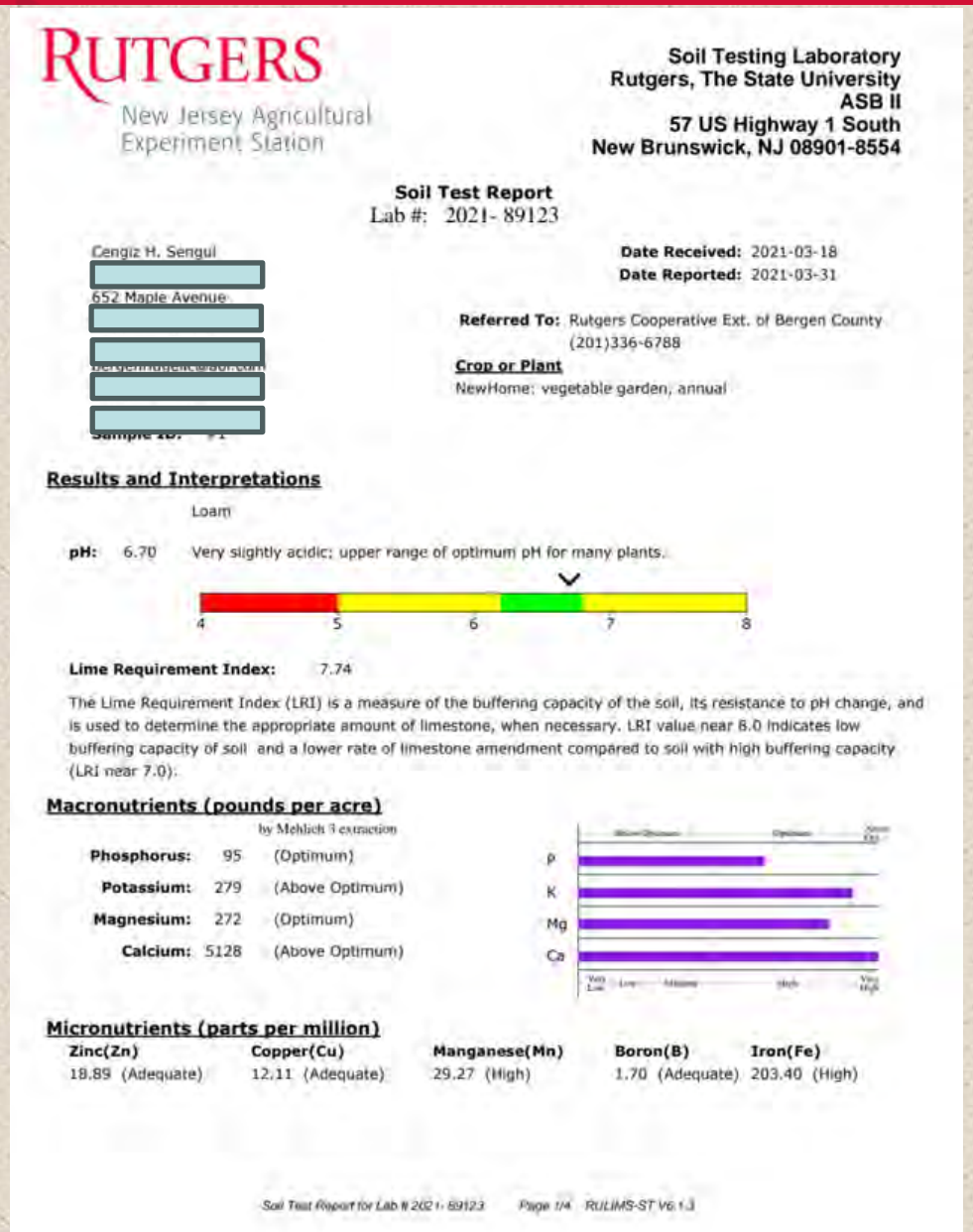
Check Your Soil

- **<u>Soil Texture Test</u>**

  Roll soil into a ball in hand and see how it forms
  - Hard ball – Clay/Silt soil
  - Soft ball – Loamy soil
  - No ball – Sandy soil

- Sample the soil and send to the ***Rutgers Soil Testing Lab*** for:
  - Nutrient analysis/ recommendations ($20)
  - pH analysis/ recommendations
  - Percent sand/ silt/ clay ($30)





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Soil Testing Laboratory
Rutgers, The State University
ASB II
57 US Highway 1 South
New Brunswick, NJ 08901-8554

Soil Test Report
Lab #: 2021- 89123

Cengiz H. Sengul
652 Maple Avenue

Date Received: 2021-03-18
Date Reported: 2021-03-31

Referred To: Rutgers Cooperative Ext. of Bergen County (201)336-6788

Crop or Plant
NewHome: vegetable garden, annual

Results and Interpretations

Loam

pH: 6.70 Very slightly acidic; upper range of optimum pH for many plants.

4 5 6 7 8

Lime Requirement Index: 7.74

The Lime Requirement Index (LRI) is a measure of the buffering capacity of the soil, its resistance to pH change, and is used to determine the appropriate amount of limestone, when necessary. LRI value near 8.0 indicates low buffering capacity of soil and a lower rate of limestone amendment compared to soil with high buffering capacity (LRI near 7.0).

Macronutrients (pounds per acre)

by Mehlich 3 extraction

Phosphorus:	95	(Optimum)
Potassium:	279	(Above Optimum)
Magnesium:	272	(Optimum)
Calcium:	5128	(Above Optimum)

P K Mg Ca

Micronutrients (parts per million)

Zinc(Zn)	Copper(Cu)	Manganese(Mn)	Boron(B)	Iron(Fe)
18.89 (Adequate)	12.11 (Adequate)	29.27 (High)	1.70 (Adequate)	203.40 (High)

Soil Test Report for Lab # 2021- 89123 Page 1/4 RULIMS-ST V6.1.3

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Determine Existing Utility Lines (free)

CALL BEFORE YOU DIG "811"

- **NJ One Call: 1-800-272-1000**
- Free mark-out of underground gas, water, sewer, cable, telephone, and electric utility lines
- Call at least 3 full working days, but not more than 10 days, prior to planned installation date
- Do not place rain garden within 5' horizontally and 1' vertically from any utilities

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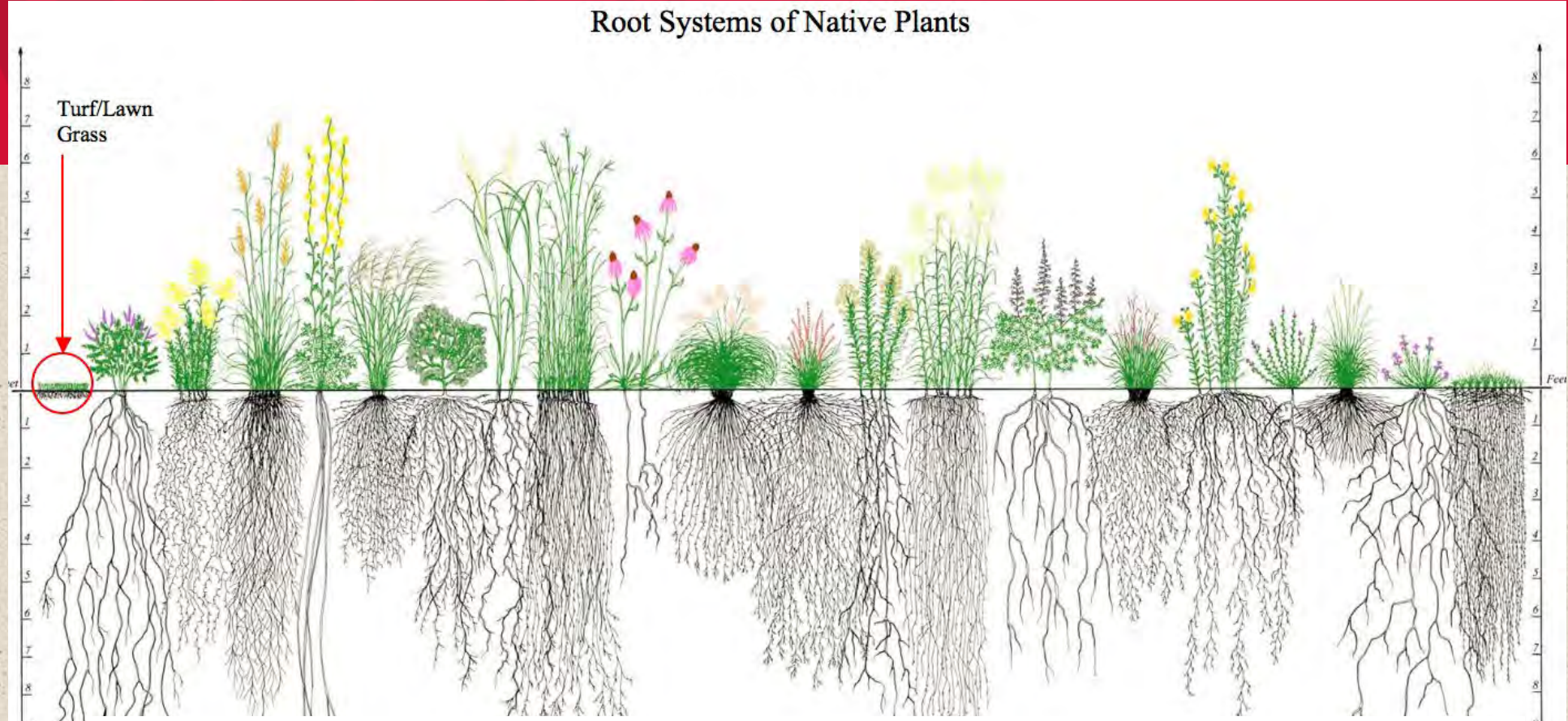
Plants for the Garden

- Use native plants
- Deep roots
- Pollinators evolved with them.
- More disease resistant.
- Little or no fertilizer.

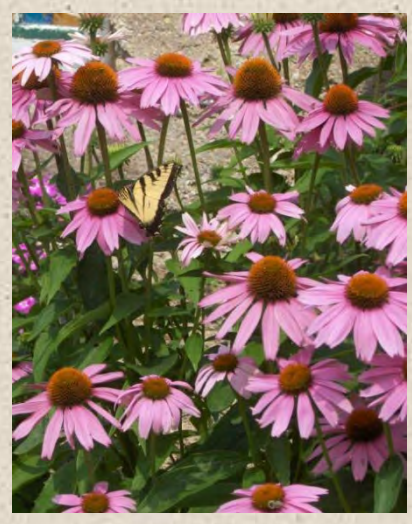


- Native plants store or degrade stormwater-related pollutants before they reach natural water systems.
- These plants help transfer surface water back into the groundwater, not into the overburdened storm water drainage systems or highly impacted stream systems.

Diagram referenced from the "Conservation Research Institute"

Lizard's Tail – FACW+
Saururus cernuus

Butterfly Weed – UPL
Asclepias tuberosa



Purple Cone Flower – UPL
Echinacea purpurea

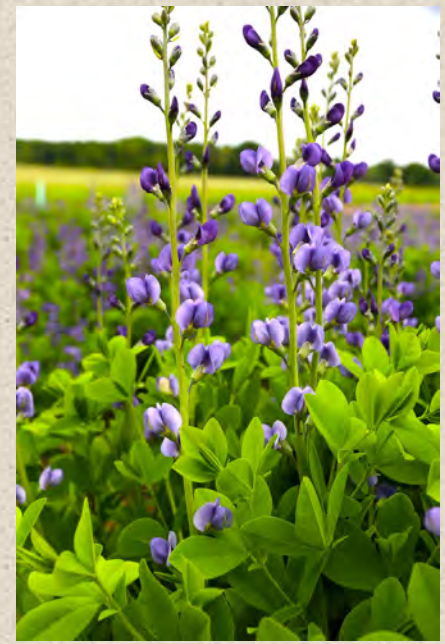
Dense Blazing Star – FAC+
Liatris spicata

Downy wood mint - UPL
Blephilia ciliata

Black-eyed Susan – FACU
Rudbeckia hirta

Wild Bergamot/ Bee Balm –UPL
Mondarda punctata

Beard Tongue – FAC+
Penstemone hirsutus



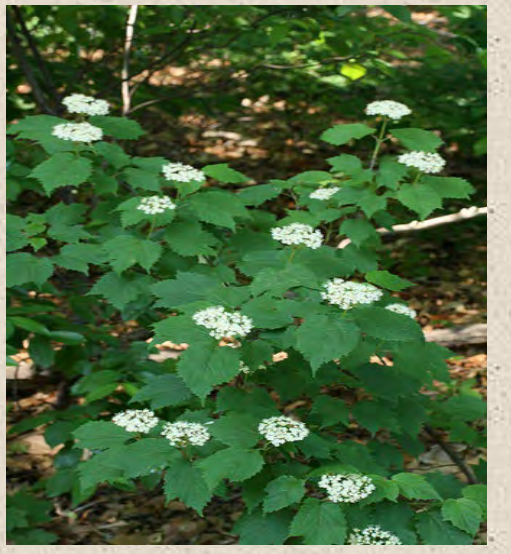
Blue False Indigo - FAC
Baptisia australis

Culvers Root – FAC
Veronicastrum virginicum

Lowbush blue berry – FACU-
Vaccinium angustifolium

Sneeze weed & Smooth Aster – FAC
Helenium autumnale
Symphyotrichum laeve

Golden Alexander - Fac
Zizia aurea



Maple leaf viburnum – UPL
Viburnnum acerifolium

Sage - UPL
Salvia sp.

Blue flag iris – OBL+
Iris versicolor

Rattlesnake Master – FAU-
Eryngium yuccifolium

Sweet pepperbush – FAC+
Clethra alnifolia

Meadowsweet – FAC+
Spiraea latifolia

Cardinal Flower – FACW+
Lobelia cardinalis

New England Aster – FAC+
Symphyotrichum novae-angliae

Boneset – FACW+
Eupatorium perfoliatum

Purple Joe-pye – FAC
Eupatorium purpureum

Spotted horsemint – UPL
Monarda punctata

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Excavate to the Desired Depth

Level the Rain Garden Ponding Area

Leonard Park, Morris County

Prepping a Pollinator Garden

RCE of Camden County


TEAM
SUBARU

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Mulch Around New Plants

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Water! Every other Day First Summer

Homeowner rain garden. Drainage over family room.

June

September


mid-May

Grow Your Own

Prairiemoon.com

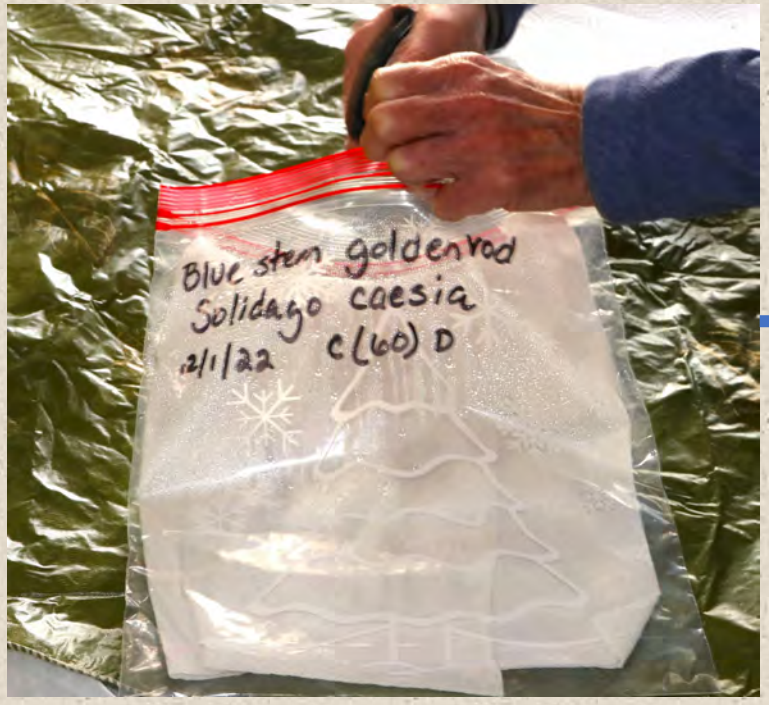
Germination Codes

Anise hyssop seed:

C(30) D

Cold stratify 30 days
Surface sow

Stratify Seed (just chillin'…)



Install a Rain Barrel with your Pollinator Garden

Superior Wastewater Division of Public Works

Links provided for videos about how to build, install and paint your own rain barrel.