



RainScapes Gardens

Stormwater management and pollinator habitat

- Ann English, PLA, ASLA
- RainScapes Program Manager
- Montgomery County DEP
- October 8, 2023
- St. Dunstan's Episcopal Church



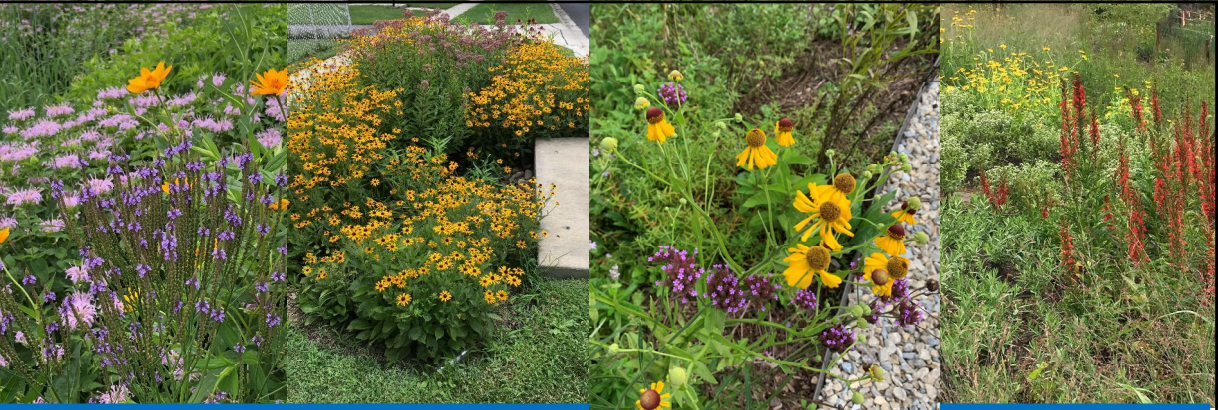
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Set the Table Plants for Fall pollinators



29



Plant Selection Matters

Plants are a key component of pollinator support year round

30

Sun

Woody plants



Winterberry
Ilex verticillata



Red buckeye
Aesculus pavia

31

Understory/ Small Trees



Chionanthus virginicus, *Hamamelis vernalis*, *Cercis canadensis*, *Amelanchier* x 'Autumn Brilliance'

32

Shrubs



Button Bush
Cephalanthus occidentalis



Witch-alder
Fothergilla gardenia



Silky dogwood
Cornus amomum

33

Sun

Vines

Woodbine



Lonicera sempervirens

34

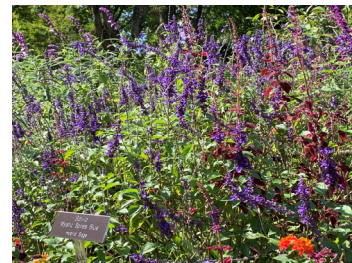
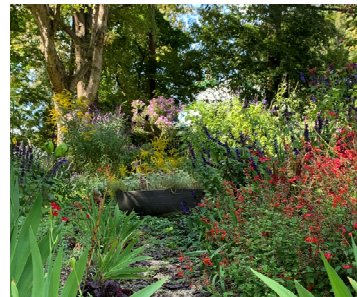
Sun

Perennials and annuals

Salvias



Salvia leucothoe



Salvia 'Mystic Blue Spires'

35

Perennials and annuals



Salvia guarantica 'Black & Blue'



Physostegia virginiana 'Vivid'

36

Plants for sunny dry areas



*Phlox subulata**
(Creeping Phlox) 2-4"



Asclepias tuberosa
(Butterflyweed) 12-24"



Liatris spicata 'Kobold'
(Gayfeather) 24-30"



Solidago sphacelata 'Golden Fleece'
(Dwarf Goldenrod) 18-24"



Iris cristata
(Dwarf Crested Iris)

37

Plants for sun/moist areas



Viburnum dentatum
'Blue Muffin' (Viburnum)
'Chicago Lustre' a good
pollinator 5' +



Panicum virgatum
'Heavy Metal'
(Switch Grass) 4'



Packera aurea (Sun OK if moist)
(Golden Groundsel)



Penstemon digitalis
'Husker Red'
(Beardtongue) 2-2.5'



Asclepias incarnata
(Swamp Milkweed) 2-5'

38

Plants for shade



Erigeron pulchellus
(Robin's Plantain) 1' ; can handle ¼ day of sun



Polystichum acrostichoides
(Christmas Fern) 2'



Iris cristata
Dwarf-crested Iris 6" (part sun)



Sedum ternatum
(Sedum) 6"



Carex rosea
Rosy sedge 2'



Chrysogonum virginianum
Green and Gold 6"

39

Forbs/ Perennials for summer/ fall



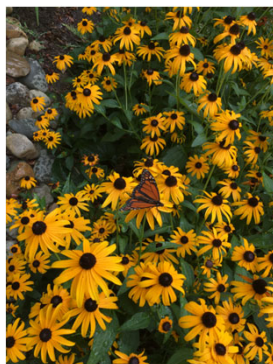
Hibiscus moscheutos, *Baptisia australis*, *Iris versicolor*, *Symphyotrichum oblongifolium* 'October skies', *Monarda didyma* 'Jacob Kline', *Asclepias tuberosa*, *Echinacea purpurea*

40

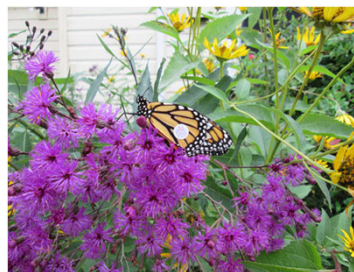
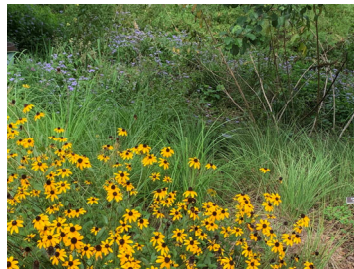
Sun

Perennials

Black eyed susans , Joe-Pye and Ironweed



Rudbeckia fulgida



Vernonia noveboracensis



Joe Pye Weed
Eupatorium fistulosum
"Little Joe"

41

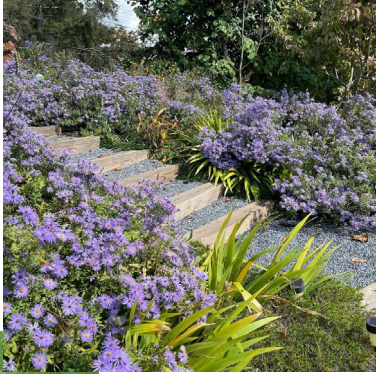
Sun

Perennials

Asters



Symphyotrichum novi-belgii
'Wood's Pink'



Symphyotrichum novae-angliae
'English Countryside'



Symphyotrichum oblongifolium 'October Skies'



E. Jacobs

42

Sun

Perennials

Goldenrod



Solidago sphacelata 'Golden Fleece'



Solidago shortii 'Solar Cascade'



Turtlehead and 'Jeana' phlox
Chelone glabra
Phlox paniculata 'Jeana'

43

Sun

Perennials

Mountain mints



Pycnanthemum virginiana



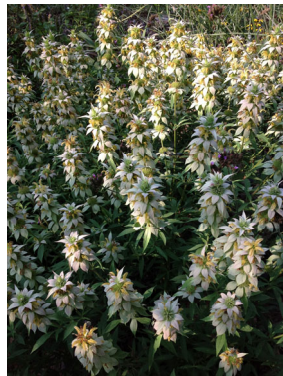
Pycnanthemum muticum

44

Sun

Perennials

Spotted beebalm



Monarda punctata



45

Forbs/ Perennials for pollinators

Monarda fistulosa, *Chelone glabra*, *Echinacea purpurea*,
Phlox paniculata 'Jeana',
Asclepias incarnata,
Pycnanthemum muticum,
Monarda punctata

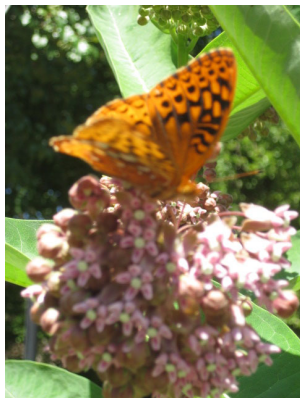


46

Sun

Perennials

Milkweeds



Asclepias syriaca, *A. tuberosa*, *A. incarnata*

47

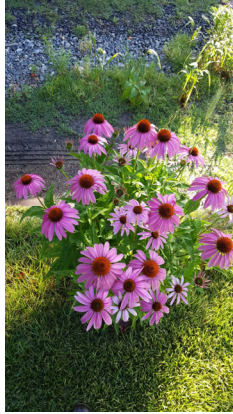
Perennials

Purple coneflower

Echinacea purpurea



'Magnus'



'Kim's Knee-hi'



48

Sun

Perennials

Turtlehead



Chelone glabra



49

Sun

Perennials

Swamp sunflower

*Helianthus angustifolius*

Wild quinine

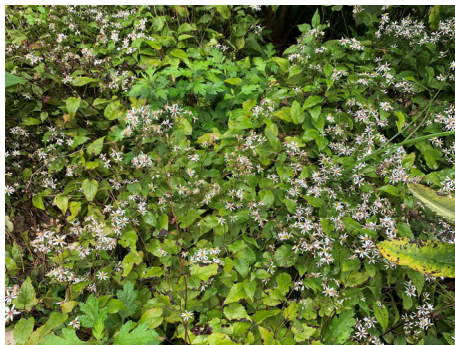
*Parthenium integrifolium*

50

Shade

Perennials

White wood aster

*Aster divericatus*

Autumn Bride Coral Bell

*Heuchera villosa* 'Autumn Bride'

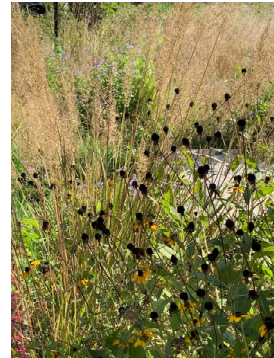
51

Sun

Perennials - combinations



NE Asters and Goldenrod (and Joe-pye in seeds)



Rudbeckia and grass

52

Graminoids – Grasses



Switch Grass
'Shenandoah'
Panicum virgatum



Switch Grass
'Heavy Metal'
Panicum virgatum



Little Blue Stem
'Standing Ovation'
Schizachyrium scoparium

53

Graminoids – sedges and rushes



River Oats
Chasmanthium latifolium



Social sedge
Carex socialis

54

Sedges & Grasses – may be small like ground covers or large like shrubs



Carex radiata, *Carex flaccosperma*, *Schizachyrium scoparius*, *Panicum virgatum*

55

Grasses support pollinators in the fall and winter



Eragrostis spectabilis
Muhlenbergia capillaris
Schyzachirium scaparius
Andropogon gerardii
Panicum virgatum 'Shenandoah'

56

Structure
 in the
 garden
 and
 homes for
 the winter

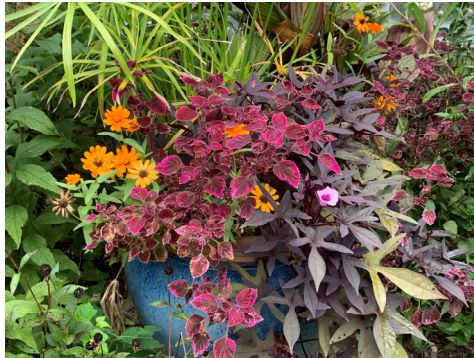


57

Annuals

Bridge between seasons

Fall is their last hurrah



58

Annual pots
bridge from summer to
through frost



Salvia, Lantana and Scaveola

A mixed annual pot provides
floral resources and color in
the fall garden

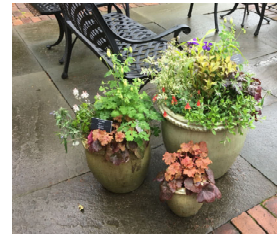
Native perennials can be
in pots too and provide
longterm benefits



Rudbeckia fulgida will bloom in summer and
fall and provide seed heads in winter
Juncus effusus
Cryopsis mariana

59

Small planting, Big impact!



Mt. Cuba

60



Party Planning Aids

65

Resources for Projects



Challenges

- Public knowledge about Green Infrastructure (GI) BMPs
- How to engage underserved communities
- Plant availability/ Climate Change impacting plant recommendations
- Lack of landscape knowledge in general

RainScapes are Green Infrastructure projects....



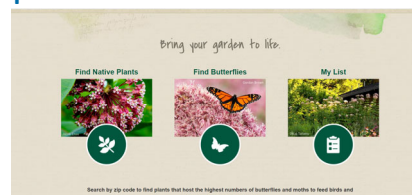
Opportunities

- Plain English information of technical topics
- Education for a diverse population
- Trusted information source
- 24/7 availability of information to an interested public

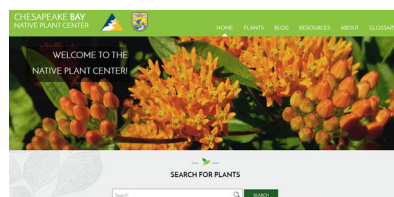
<https://www.montgomerycountymd.gov/water/rainscapes/resources.html>

66

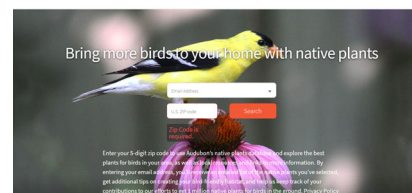
Plant databases for pollinators



<https://www.nwf.org/nativeplantfinder/>



<https://www.nativeplantcenter.net/>



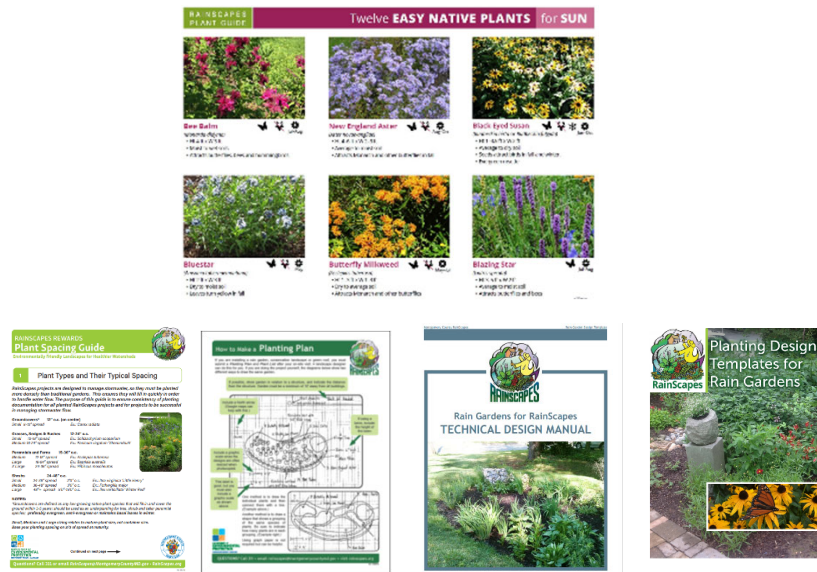
<https://www.audubon.org/native-plants>

USGS Pollinator Library

https://www.usgs.gov/centers/nprc/science/pollinator-library-a-decision-support-tool-improving-national-pollinator?qt-science_center_objects=0#qt-science_center_objects

67

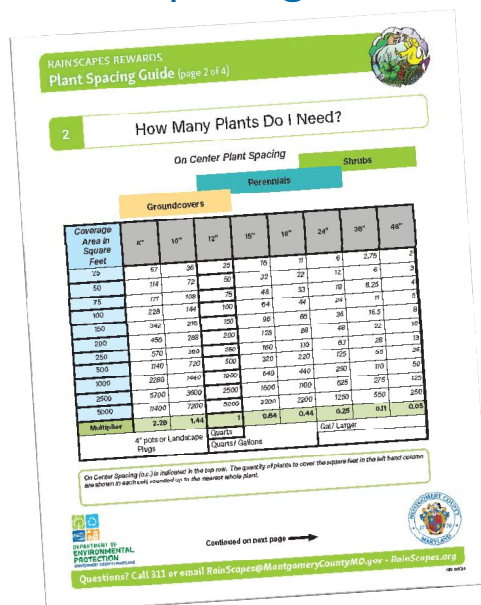
Design and Planting Plans Guides are Online



<https://www.montgomerycountymd.gov/water/rainscapes/resources.html>

68

Plant Spacing Guidance



Planting Plan and Plant List Reference

Remember to show the garden in relation to the structure

RAINSCAPES REWARDS How to Make a Planting Plan

Environmentally Friendly Landscapes for Healthier Watersheds

Before installing a rain garden, conservation landscape or green roof, you must submit a **Planting Plan** and **Plant List** for review and approval by RainScapes staff. A landscape designer can do this for you. If you are doing the project yourself, the diagrams below show two different ways to draw the same garden; this is a **minimum standard**. We cannot accept post-it notes, excel or other creative but non-standard plan formats. (Note, the garden should not have a lot of exposed area since planted.)

Indicate where the water comes from to the garden.

Show the garden in relation to a structure, and indicate the distance from the structure. Rain Gardens must be a minimum of 10' away from all buildings.

Don't drink! No 5' 0" Outer Edge

Back of House

Include at least one dimensional line.

If using a berm, include the height of the berm.

Include a graphic scale since the designs are often resized when photocopied.

This label is OK, but you must also include a graphic scale as shown above.

One method is to draw the individual plants and then connect them with a line. (Example above.)

Another method is to draw a shape that shows a grouping of the same species of plants. Be sure to indicate how many plants are in each grouping. (Example right.)

Using graph paper is not required but can be helpful.

Questions? Call 311 or email RainScapes@MontgomeryCountyMD.gov - RainScapes.org

RAINSCAPES REWARDS How to Write a Plant List

Environmentally Friendly Landscapes for Healthier Watersheds

When you submit a planting plan, it must be accompanied by a plant list. See the example below.

Scientific name REQUIRED. If you don't know it, ask us.

Common Name

Pot size is required.

Quantity and spacing are required so we can determine plant cover.

Add a column for pollinator value

Scientific Name	Common Name	Pot Size	Quantity	Spacing
<i>Chionanthus virginicus</i>	Fringe tree	15 Gallons	1	N/A
<i>Monarda didyma</i>	Bee Balm	Quart	14	3' o.c.
<i>Asclepias tuberosa</i>	Butterfly Milkweed	Quart	7	18" o.c.
<i>Phlox subulata</i>	Moss Phlox	Quart	20	18" o.c.
<i>Symphoricarum novae-angliae</i>	New England Aster	1 Gallon	5	2' o.c.
<i>Echinacea purpurea</i>	Purple Coneflower 'Kim's Knee High'	1 Gallon	11	18" o.c.
<i>Chasmanthium latifolium</i>	Sea oats	Sped	5	2' o.c.

Seed is not allowed.

Perennials are usually planted 12" - 18" o.c.
Shrubs are usually planted 3' - 4' o.c.
o.c. (on center) is the distance from the center of one plant to the center of the next, which depends on the mature width of the plants.

For more information on plant spacing, please refer to our **Plant Spacing Guide**.
Quickly get a rough estimate of plant quantities needed for a given area with this online **Plant Spacing Calculator**.
For planting design templates, please refer to our preplanned rain garden designs; these can also be adapted for conservation landscapes.

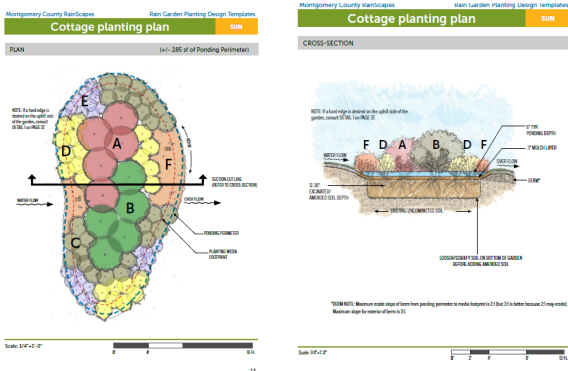
Questions? Call 311 or email RainScapes@MontgomeryCountyMD.gov - RainScapes.org

Space ground cover layer plants to fill in within a year without overgrowing the space

<https://www.montgomerycountymd.gov/DEP/Resources/Files/downloads/rainscapes/fact-sheets/How2MakePlantingPlanPRINT.pdf>

70

Rain Garden Templates



- A- *Ilex verticillata*
 B- *Baptisia australis*
 C- *Iris versicolor*
 D- *Rudbeckia fulgida*
 E - *Asclepias tuberosa*
 F- *Phlox subulata*

Montgomery County RainScapes Rain Garden Planting Design Templates

Cottage planting plan

PLANT LIST

A	<i>Asclepias tuberosa</i> 'Honeydew'	12" x 18" 4" x 6"	14	18" o.c.	Highly pollinated with many people. Blooms in late spring.
B	<i>Baptisia australis</i>	12" x 18" 4" x 6"	14	18" o.c.	Highly pollinated with many people. Blooms in late spring.
C	<i>Iris versicolor</i> 'Patriot'	12" x 18" 4" x 6"	14	18" o.c.	Highly pollinated with many people. Blooms in late spring.
D	<i>Rudbeckia fulgida</i> 'Black Gold'	12" x 18" 4" x 6"	14	18" o.c.	Highly pollinated with many people. Blooms in late spring.
E	<i>Asclepias tuberosa</i> 'Honeydew'	12" x 18" 4" x 6"	14	18" o.c.	Highly pollinated with many people. Blooms in late spring.
F	<i>Phlox subulata</i> 'Moss Phlox'	12" x 18" 4" x 6"	14	18" o.c.	Highly pollinated with many people. Blooms in late spring.

Notes: See our online spacing guide for more information on plant spacing. For more information on plant spacing, please refer to our **Plant Spacing Guide**.
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Montgomery County RainScapes Rain Garden Planting Design Templates

Cottage planting plan

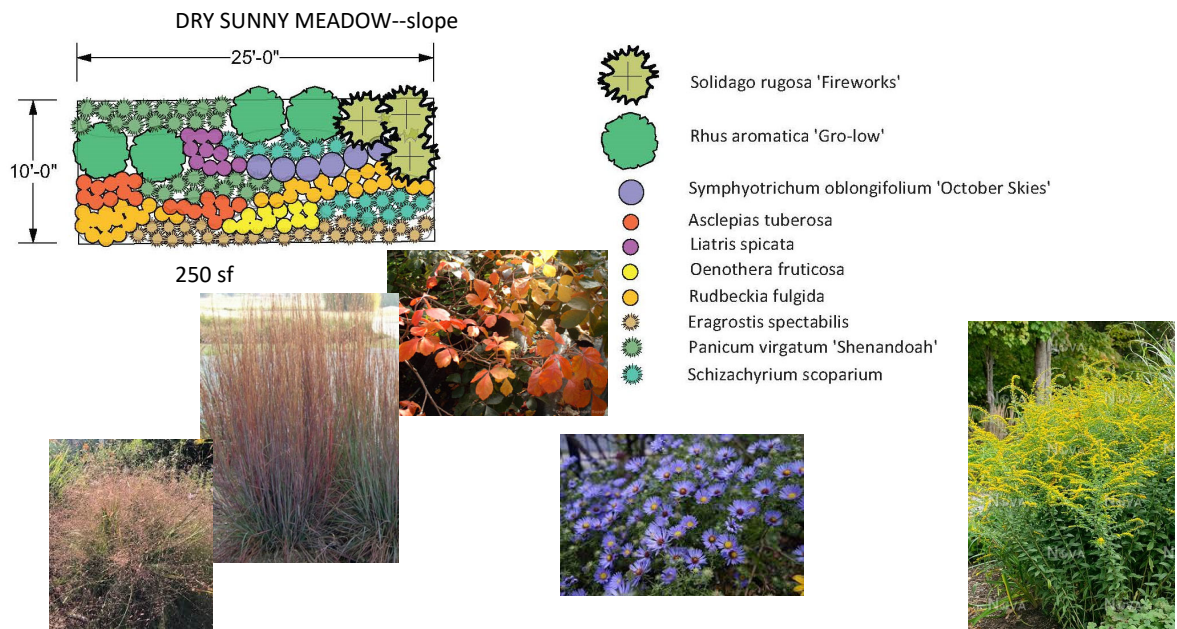
ALTERNATE PLANT CHOICES

A	<i>Ilex verticillata</i>	12" x 18" 4" x 6"	14	18" o.c.	Highly pollinated with many people. Blooms in late spring.
B	<i>Baptisia australis</i>	12" x 18" 4" x 6"	14	18" o.c.	Highly pollinated with many people. Blooms in late spring.
C	<i>Iris versicolor</i>	12" x 18" 4" x 6"	14	18" o.c.	Highly pollinated with many people. Blooms in late spring.
D	<i>Rudbeckia fulgida</i>	12" x 18" 4" x 6"	14	18" o.c.	Highly pollinated with many people. Blooms in late spring.
E	<i>Asclepias tuberosa</i>	12" x 18" 4" x 6"	14	18" o.c.	Highly pollinated with many people. Blooms in late spring.
F	<i>Phlox subulata</i>	12" x 18" 4" x 6"	14	18" o.c.	Highly pollinated with many people. Blooms in late spring.

Scale: 1/4" = 1'-0"

71

New Conservation Landscape planting templates !



72

Why Use a Template?

Ease/confidence in success

- Plant combinations for each zone already figured out
- Plant quantities determined
- No previous design experience
- Multiple options
- Benefit from others' efforts



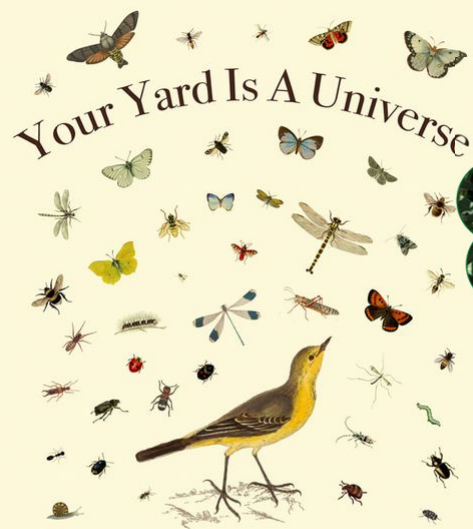
Limitations

- Site doesn't match footprint of template
- Template isn't the right size
- Template options don't fit desired style

73



Your Yard Is A Universe



Many small creatures can spend their whole life within the perimeters of your yard. Their lives depend on you.

No Toxins - Plant Natives - Leave The Leaves

To learn more about sustainable landscaping visit: www.healthyyards.org

HEALTHY  YARDS

Picture source: Biodiversity Heritage Library



Imagine the possibilities!

74







Thank you!



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DEPARTMENT OF
**ENVIRONMENTAL
PROTECTION**
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75