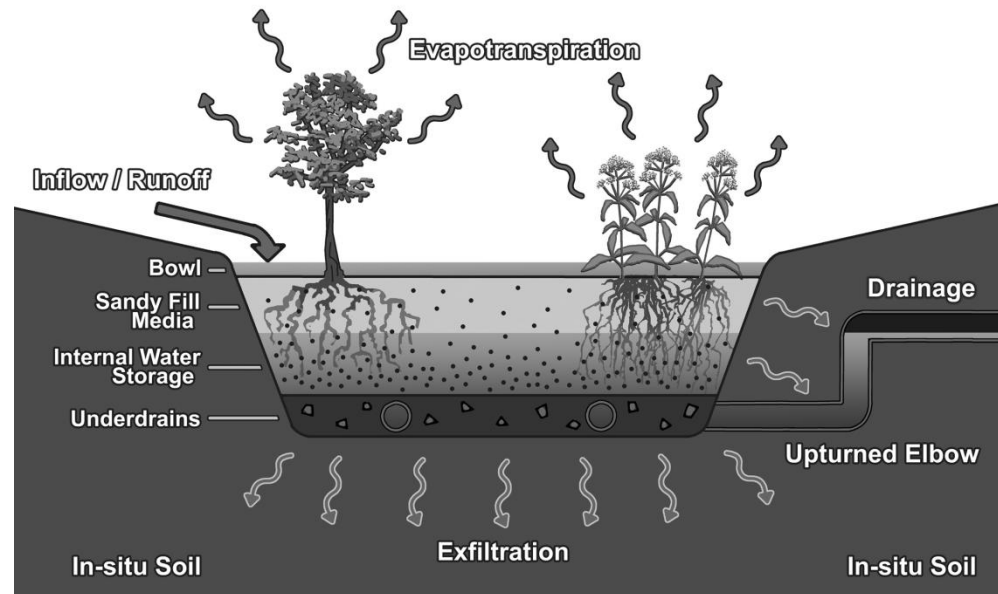


Bioretention



Bioretention (Rain Gardens)



Bioretention Cells



Large Parking Lot



Grassed Bioretention



Transportation Bioretention



Backyard Rain Gardens

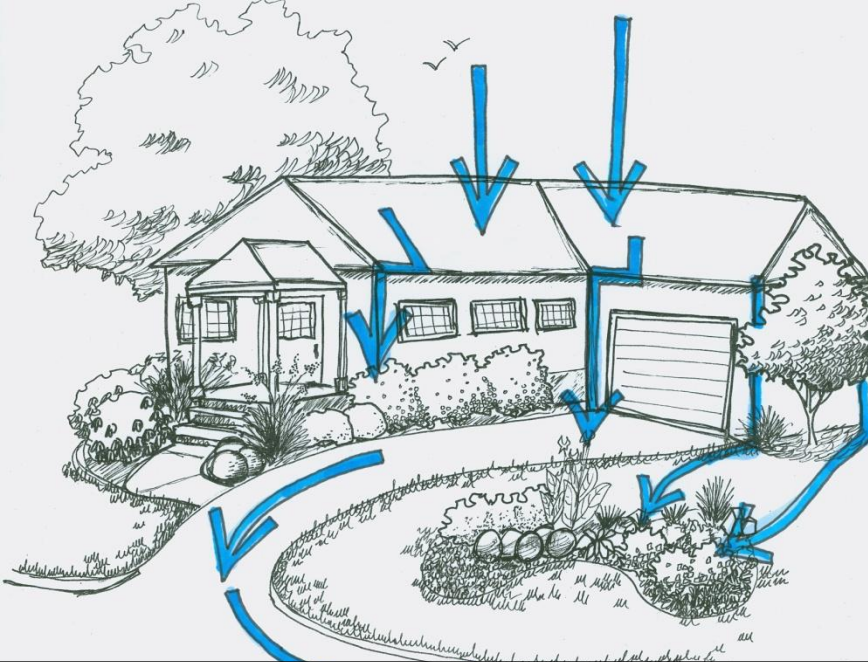


A photograph of a garden during a rainstorm. In the foreground, there are branches with vibrant red leaves, some of which are wet with raindrops. The background shows a green lawn and a path, with rain falling vertically across the scene. A semi-transparent light green box is overlaid on the image, containing the title and author information.

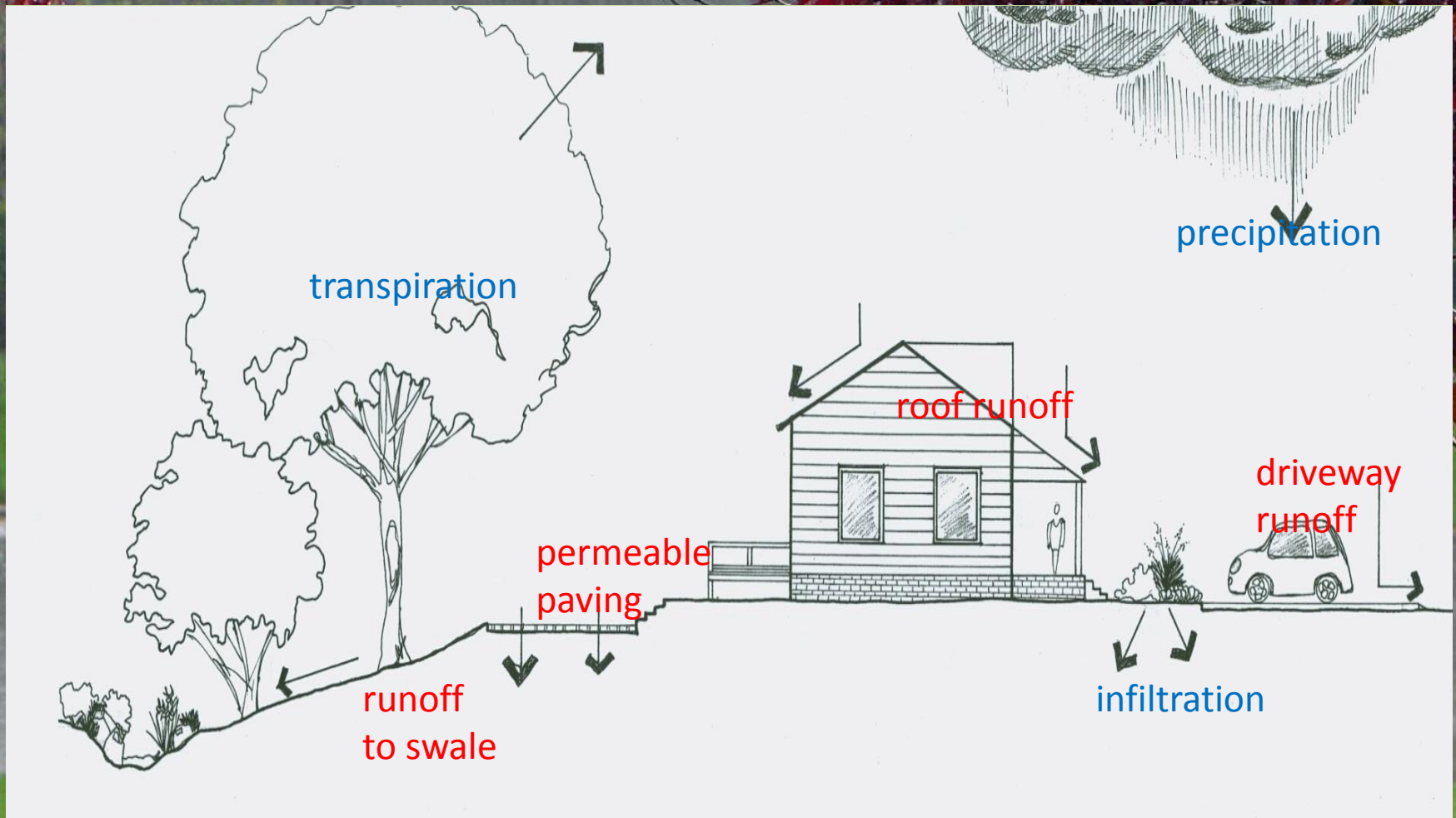
Rain Gardens – Not about Rain

Helen Kraus

Department of Horticultural Science
North Carolina State University



Rain Gardens & The Water Cycle



What is a Rain Garden?



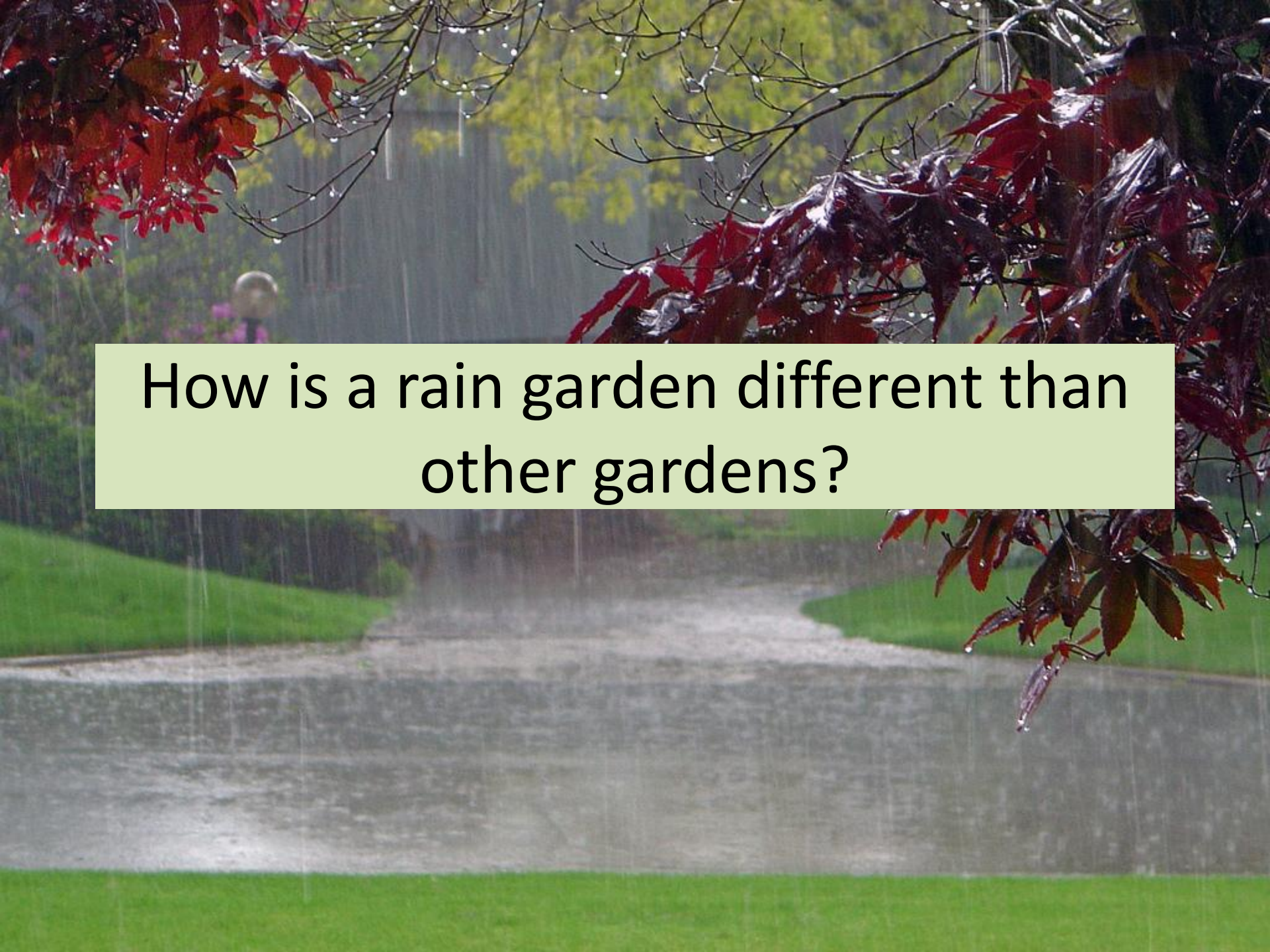
Pollutants Filtered by a Rain Garden

Pollutant	Source	Removal
Metals	Roof shingles, oil, grease, soil	43-97%
Phosphorus	Detergents, fertilizers, pet wastes	65-87%
Nitrogen	Fertilizer, pet waste, organic matter	15-92%

What is a Rain Garden?





A photograph of a rain garden during a rainstorm. In the foreground, there are branches with vibrant red leaves, some of which are wet and glistening. The background shows a gravel area that has collected water, with a green lawn on either side. A small, round, white garden light is visible in the distance on the left. The overall scene is misty and rainy.

How is a rain garden different than
other gardens?



Wetland



Bog



Rain Garden



Dry Garden



What a
rain garden
is NOT!!!



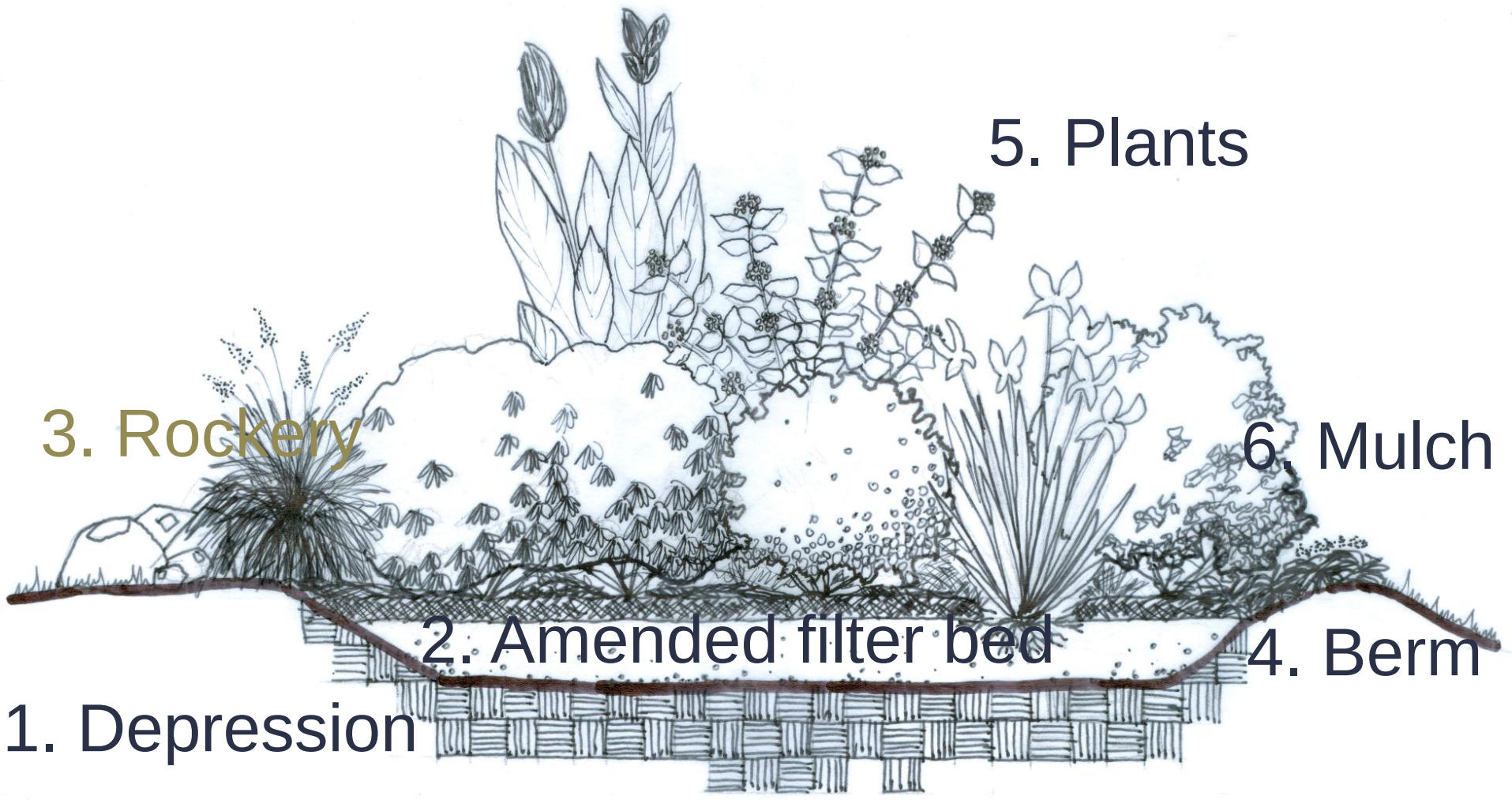
Retention Basin



Water Garden



Success with Rain Gardens - Rain Garden Components



Key to Plant Selection

- “normal” rainfall for this area is about 40”/year...
- Typically when we have a rain event, it’s common to receive a lot at once—Then long periods of dryness...

SO...appropriate plants are those that can withstand a lot of water AND periods of no water at all!!!

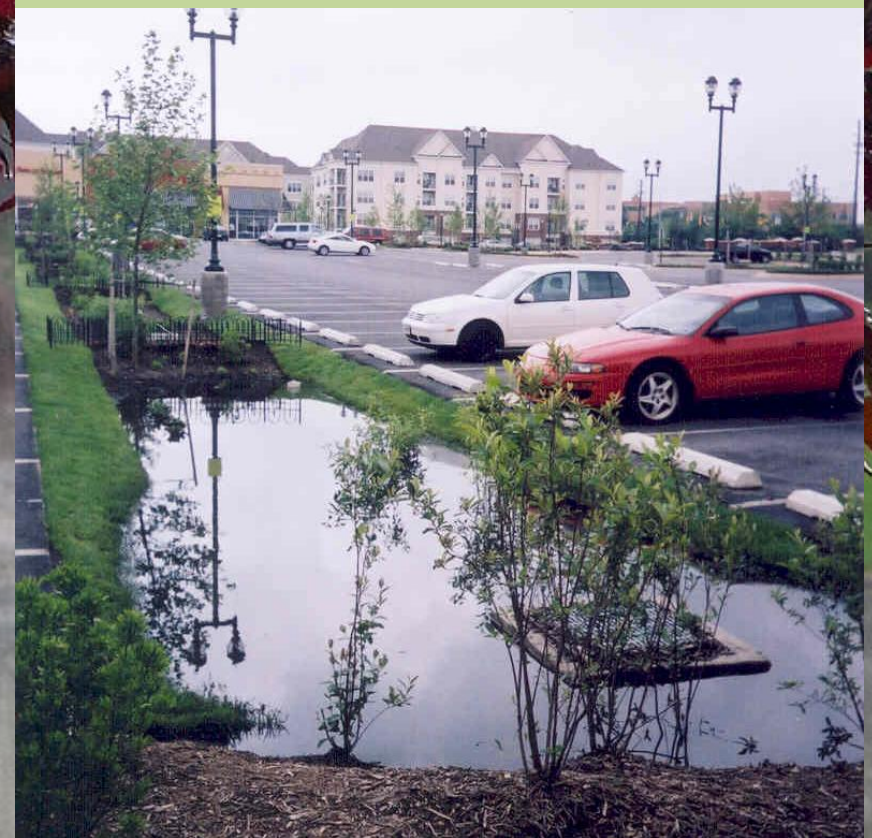


Newly installed rain garden in Rockville, MD

At Planting



After a Rain Event



Plant Architecture



Deciduous / Evergreen



Fibrous Root System

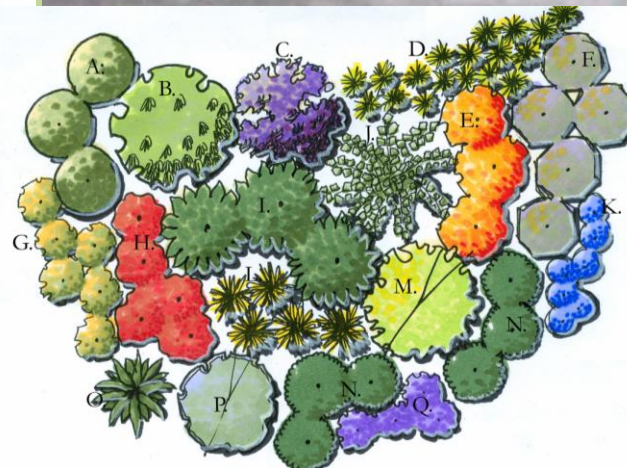
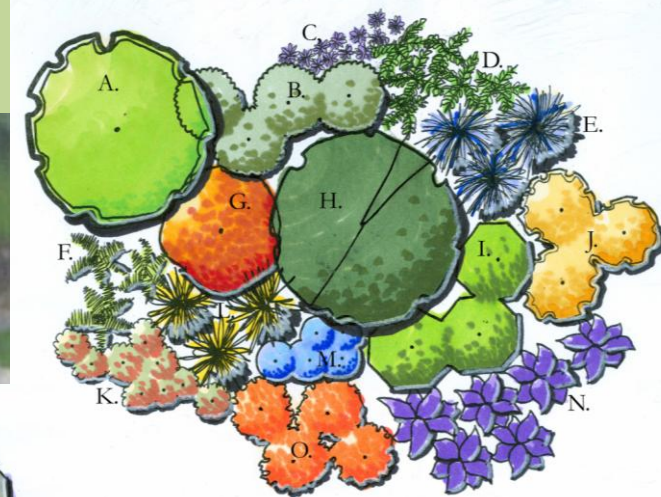
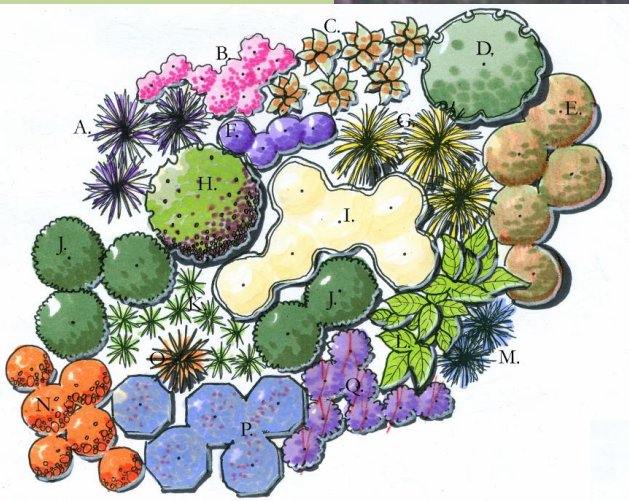


Garden Style and Environment

Sunny

Part-Sun

Shady



Garden Style: Naturalistic



Garden Style: Informal



Garden Style: Formal





Plant Recommendations

Native Species	Cultivars
<i>Betula nigra</i>	<i>Betula nigra</i> 'Duraheat'
<i>Magnolia virginiana</i>	<i>Magnolia virginiana</i> 'Sweet Thing'
<i>Itea virginica</i>	<i>Itea virginica</i> 'Henry's Garnet'
<i>Viburnum nudum</i>	<i>Viburnum nudum</i> 'Winterthur'
<i>Juncus effusus</i>	<i>Juncus effusus</i> 'Frenzy'
<i>Panicum virgatum</i>	<i>Panicum virgatum</i> 'Shenandoah'
<i>Helianthus angustifolius</i>	<i>Helianthus angustifolius</i> 'First Light'
<i>Eupatorium purpureum</i> subsp. <i>maculatum</i>	<i>Eupatorium purpureum</i> subsp. <i>maculatum</i> 'Gateway'

Plant Recommendations

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