Rain Garden Maintenance

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Watering
New Rain Gardens will need to be watered for the first one or two years until the garden is established!
Landscape Fabric and Mulch

Rutgers Cooperative Extension
Caring for Native Plants

Care for any newly-planted native plants that may have been uprooted immediately following rain events.
Rain Garden: Maintenance Issues

• Apply mulch twice per year until groundcover establishes.

• Replace dead or diseased plant material.
# Top Ten Maintenance Needs

| 1.  | Inspections          |
| 2.  | Soil Testing         |
| 3.  | Weeding              |
| 4.  | Pruning              |
| 5.  | Mowing               |
| 6.  | Sediment removal as necessary |
| 7.  | Cleaning of gutters  |
| 8.  | Re-planting as necessary |
| 9.  | Harvesting Plants    |
| 10. | Photo Journal        |
Measurement #1 Inspections

• What am I inspecting for?
  – Weeds & Invasive Plants
  – Plant Health
  – Excessive Sediment
  – Movement of Sediment within the Garden
When to Inspect the Rain Garden

Growing Season

Prior to Season
- After large storm events
- During weather extremes

End of Season
Observing the Rain Garden

Observe the rain garden during rain events and note any problems or successes.

Problem: Gullying after rain event
Solution: Add a berm and/or plants

Success: Withstood rain event
Replacing Mulch that has Washed Away
Rain Garden: Maintenance

Issues

• Repair planting soil bed if erosion occurs.

• Core aerate or cultivate bare areas annually if surface becomes clogged with fine sediments.
Measure #2: Soil Testing

• Soil should be tested every 3 years.

• pH should be in an acidic range
  – If pH is <5.2, apply limestone
  – If pH is >7.0 to 8.0, add aluminum sulfate or sulfur to reduce pH according to recommendations.

• Soil amendments should only be added when no storms are expected.
Measure #3: Weeding

- Some “volunteers” may become part of your rain garden, which could be a positive addition.

- Weeding more often will limit the amount of time you will have to spend weeding.
Weeding

- Watch for overly-competitive species
- Some weeds can be aggressively spreading underground by rhizomes

RCE’s NJ Weed Gallery: [http://www.rce.rutgers.edu/weeds](http://www.rce.rutgers.edu/weeds)

USDA PLANTS Database: [http://plants.usda.gov](http://plants.usda.gov)
Invasive Species

Be on the lookout for these invasive species in your rain garden:

**Wisteria**

**Japanese Knotweed**

Photo by Betty Ann Kelly

Photo by Betty Ann Kelly
Invasive Species

Thistle

Wild Cucumber

Photos by Betty Ann Kelly
Apply New Mulch
Measure #4: Pruning

*Pruning directs growth of plants, improves health, and increases production of flowers and fruits.*

- How does pruning a rain garden differ from my other gardens?
  - In a rain garden, dense shrub growth is encouraged to provide increased filtering capacity.
Measure #4: Pruning

- Tattered and discolored plants should be cut back after spring arrives and growth is 4-6” tall.

- “Deadheading” plants will also lead to succeeding new growths.
Pruning

Pruning directs growth of plants, improves health, and increases production of flowers and fruits.

Types of Pruning:

**THINNING**: basically, thinning out. This type of pruning removes entire branches back to the main trunk or major branches to the ground.
- **Expected result**: large, open shrub

**HEADING**: also known as heading back. This type of pruning removes only part of a branch.
- **Expected result**: growth of multiple branches in place of single branch, thus a more dense shrub.

In a rain garden, dense shrub growth is encouraged to provide increased filtering capacity.
Measure #5: Mowing

• After the growing season, it will be necessary to remove stems and seedheads. These can be left for habitat and in some areas, aesthetics.

• A string trimmer can be used to maintain over-competitive growths.

• Dead plant materials can also be removed by a string trimmer or mower, if the mowing deck can be raised to cut at 6-8”.
Rain Gardens Can Provide Winter Interest!
Mowing Schedule

• Mowing native grasses should occur two times a year in your rain garden.
  
  – Initial mowing can be done after the first few weeks of growth – early Spring.
  
  – Final mowing can be completed after ground nesting birds have hatched the next generation
    • Usually near mid-May.
Measure #6: Re-Planting

• After the first season, it may be obvious what plants were successful in this niche and what plants do not work for your rain garden.

  – Over the growing season, was the weather drastically different than the conditions the basin was designed to retain?

  – Was flow too fast through the basin, damaging health?

  – Is flow being incorrectly diverted from the rain garden?
Removing/Replacing Plants

*Remove and replace plants that have not survived or that are diseased*

- Re-seed the berm if there are areas of exposed soil
- Replace rocks that may be diverting flow out of the garden
- Build up areas where more protection is needed
Removing Debris, Litter, and Sediment
Measure #7: Sediment Removal

Since the rain garden serves the purpose of catchment, sediment will tend to accumulate within the garden. This is a sign of success – this soil would have been directed straight to the stream, without your efforts!
Measure #7: Sediment Removal

- With a flat shovel, remove soil that has accumulated in the basin. Avoid the vegetation!

- There is no exact schedule for when this should be done. Try to monitor sediment accumulation, especially after all heavy storm events.

- Be sure that sediment is not churning up from exposed areas of the rain garden. Flow should be dissipated to avoid these situations, which are likely to occur in the early stages of stabilization.

- Heavy equipment should not be needed for this task.
Measure #8: Cleaning of Gutters

- Make sure rain gutters are clear of debris.
- If the flow of water is blocked in the gutter, the rain water will have difficulties getting to your rain garden.
Measurement # 9 Harvest Cuttings

• Collect seeds and cuttings from successful plants in the rain garden and use them for the new season.
• Plant more of the successful species in the rain garden as necessary.
Measurement #10 Prepare a Photo Journal

Take photographs from the same location for consistency

Fanwood Memorial Library, Union County

Rutgers Cooperative Extension
Keeping a Photo Journal

1 Year 6 Months

Fanwood Memorial Library, Union County

Rutgers Cooperative Extension
## Costs for 150 Square Foot Rain Garden

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rutgers Soil Test Kit for nutrients and pH</td>
<td>$15.00</td>
</tr>
<tr>
<td>Rutgers Soil Test Kit for soil texture analysis</td>
<td>$75.00</td>
</tr>
<tr>
<td>white mark-out paint</td>
<td>$5.00</td>
</tr>
<tr>
<td>5 tons of concrete or bank run sand (~$33/ton)</td>
<td>$165.00 (does not include delivery)</td>
</tr>
<tr>
<td>3 yards of topsoil (~$30/yard)</td>
<td>$90.00</td>
</tr>
<tr>
<td>5 lb bag fertilizer</td>
<td>$5.00</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>native plants (does not include shipping)</td>
<td>$105.00</td>
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<tr>
<td>2 yards of mulch ($30/yard)</td>
<td>$60.00</td>
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<tr>
<td>1 roll landscape fabric</td>
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<tr>
<td>landscape pins</td>
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<tr>
<td>8 bags of 1- 1 ½ inch river rock</td>
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<tr>
<td>soaker hose</td>
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<tr>
<td>PVC pipe (~$2.00 per linear foot)</td>
<td>$20.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$595.00</strong></td>
</tr>
</tbody>
</table>
www.water.rutgers.edu