

## STORMWATER DESIGN TOOLBOX: Rain Gardens & Bio-swales



A rain garden is a landscaped, shallow depression that allows rain and snowmelt to be collected and seep naturally into the ground. This helps recharge our groundwater supply and prevents a water quality problem called polluted runoff (nonpoint source pollution). Rain gardens are an important way to make our cities and neighborhoods more attractive places to live while enhancing ecological health.

Having a rain garden in your landscape will reap much more than what is easily visible. During a heavy rainstorm much of the water quickly washes into streets from sidewalks, parking lots, and lawns. It then goes down storm drains and eventually ends up in local water bodies. What you don't see washing away with the rain water are pollutants such as pesticides, fertilizers, and petrochemicals, which may have accumulated on lawns, driveways, and streets. A shallow depression in the lawn to capture stormwater allows this water to penetrate and move into the ground instead of running off and down into the storm drain. As the captured water slowly percolates into the ground, pollutants are filtered out, nutrients are used by the plants, or pesticides are broken down by microorganisms. Minimizing runoff into storm drains also results in decreased sediment, flooding, and shoreline damage. Compared to a conventional lawn, rain gardens allow 30% more water to soak into the ground. Because rain gardens are landscaped, they add beauty to a lawn and create a habitat for birds, butterflies, and beneficial insects.

**RDA/RSLA Landscape Architects** is currently working on a number of projects that include rain gardens as a stormwater mitigation tool. If properly integrated, a rain garden will seamlessly appear as just another part of the landscape. Some of our projects include:



### **Manorhaven Streetscape Improvements & Rain Gardens**

The Village of Manorhaven and the Greater Port Washington Business Improvement District, Manorhaven, NY

- *Project includes new traffic calming rain garden islands connected to existing storm drains; permeable pavers; native planting; seating; lighting; and roadway crosswalks.*

### **Lindenhurst Memorial Library Sustainable Parking Lot**

Lindenhurst, NY

- *Project includes a 20-car permeable paver parking lot; adjacent bio-swale with native planting; solar LED parking lighting; crosswalk; and recycled plastic wheel stops and fencing.*



Visit the **RDA/RSLA Landscape Architects** website to learn more about these stormwater mitigation tools and concepts at [www.retnauer-design.com](http://www.retnauer-design.com).