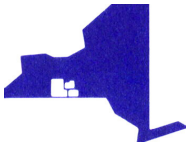
LOW IMPACT DEVELOPMENT (LID) SAMPLER

August 2007
With additions 2010

The Low Impact Development Sampler is a selection of LID projects in eleven of the Upper Susquehanna Coalition's fourteen member counties (as of 2003). The Sampler was created to:

- Show the variety of LID techniques already in place in the region.
- Prove that LID works in northern climates.
- Provide enough financial and technical information so that the reader can decide if that practice will work for him/her.
- Encourage more use of LID techniques so that rainwater becomes a resource rather than a costly and dangerous burden.
- Present the information in an easy-to-read format.

We hope you enjoy this booklet and can use some of the ideas it contains.



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In conjunction with the member counties of the:
Upper Susquehanna Coalition

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Chemung County, NY
Conservation Cabin Rain Garden

Project Location: Chemung County Fairgrounds. Grand Central Avenue and Fairview Road, Town of Horseheads.

The main reason for building the rain garden at the Fairgrounds was for demonstration purposes. The Conservation Cabin, built by the Soil and Water Conservation District, is a showcase of sound environmental practices, including a composting toilet and passive solar lighting. With its many wildlife displays, it is a favorite stop for county fair-goers. Also, numerous groups use the building for regular meetings. With all this foot traffic, the cabin is an ideal location for an educational demonstration of the various components of a rain garden.

The finished demonstration rain garden at the Chemung County Conservation Cabin.

The project was a cooperative effort of many partners. These included the Plant Material Center in Big Flats, NY, for their donation of native plants; the Chemung County Highway Department for their donation of the GEOWEB; Hendershott Excavating for the grading and excavating work; Boy Scout Troop 43, Pine City for hours of building and planting; Chemung County Fairgrounds for permission to use the property; and the Chemung County Soil and Water Conservation District, Finger Lakes—Lake Ontario Watershed Protection Alliance (FL-LOWPA), NYS Agriculture & Markets Soil and Water Conservation Committee for their funding and support.

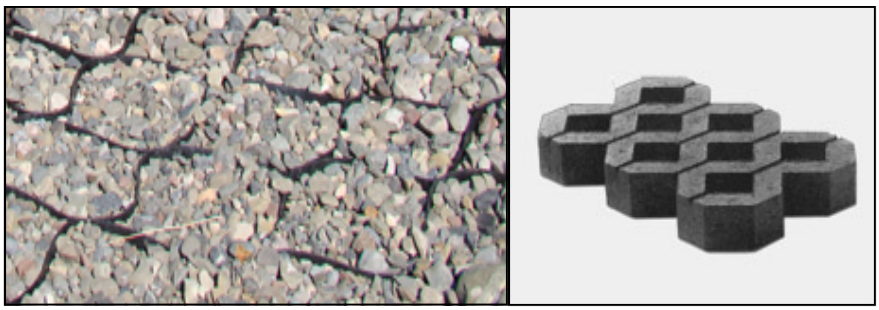
The process: A graveled area next to the Cabin was selected as the location for the rain garden. An area about 24 feet by 30 feet was excavated about a foot to remove the hard-pack so that water would percolate into the ground.

Excavation for the rain garden begins. The rain garden was an Eagle Scout project of Cody Vorhees, Boy Scout Troop 43, Pine City.

Next, thirteen members of Scout Troop 43 and five adult volunteers constructed the two and one-half foot high fieldstone wall that created the decorative yet functional border along two sides. Sand and gravel, purchased as part of the project, was placed as the first layer to provide good drainage for the rain garden.

Fieldstone wall, sand and gravel layer, sign posts, and GEOWEB installation

Next was the installation of the GEOWEB and Turfstone walkways. Both of these porous pavements allow water to infiltrate through to the ground below. The grid system can be filled with decorative stones or gravel or filled with soil and planted with grass. No matter what the material used to fill the spaces, the web system prevents erosion and helps infiltrate water. The Turfstone is a porous block that is sturdy enough to support vehicles so can be used for driveways.



The final steps were to add the composted soil and to plant the rain garden. Native grasses included: Big and Little Blue Stem, Indian Grass, Switch Grass, Deer Tongue, and Canada Wild Rye. Perennials include: Monarda (Beebalm), Day Lily, Sedum, Iris, Rudbeckia, Aquilegia, and Wild Indigo. A layer of pine bark mulch as added to help absorb water and to keep weeds down, reducing the time needed for maintenance.

Native plantings include perennial flowers
And bushes for low maintenance

ESTIMATED CONSTRUCTION COSTS: $3000 to $4000
Materials: Two dump truck loads of composted topsoil for 720 SF area, 10 bags of pine bark mulch, and GEOWEB (approx. 20' X 3') (donated). Sand and gravel for base material, Turfstone (approx. 20' X 3') and red stone mulch for walkway (project funds).

Donated crew/equipment: 18 people total. 13 scouts @ 185 hours for whole site. The rain garden itself took approx. 40 hours with 6 people excavating soil, placing sand/gravel and soil, and planting plants.

ANNUALIZED MAINTENANCE COSTS: about $30.
Expect to re-mulch the area every one to two years.