

Site 13: The Schuylkill Center for Environmental Education

BMPs:
Green Roof
Raingarden

Address: 8480 Hagy's Mill Road, Philadelphia, PA 19128

Property owner: Schuylkill Center for Environmental Education

Website: www.schuylkillcenter.org **Watershed:** Schuylkill



Located on the Montgomery County boundary, the Schuylkill Center provides the region's best vantage point of a green roof. Their mission is to promote, through environmental education, the preservation and improvement of our natural environment by fostering appreciation, understanding and responsible use of the ecosystem; by disseminating information on current environmental issues; by encouraging appropriate public response to environmental problems and also to maintain the facilities of The Schuylkill Center and conserve its land for the purpose of environmental education.

As a leader in urban environmental education, The Schuylkill Center installed a green roof on its main Education Building during 2005 to serve as both a stormwater BMP and an educational tool for visitors.

Green Roof Construction

- Funded by The McLean Contributionship
- Designed by Roofscapes, Inc.
- Installed by David Brothers
- Phase I: Membrane Liner, installed fall 2003
- Phase II: Green Medium, installed June 2005
- Total project cost: \$52,000
- Total project area: 2,215 square feet



Planning your visit:

The parking area and more than three miles of nature trails are open to the public. The best time to view the green roof is between spring and fall.

Contact Info:

Fran Lawn , (215) 482-7300
Flawn@schuylkillcenter.org

Directions: Directions are available at www.schuylkillcenter.org

Parking: Follow signs to visitors parking in the gravel parking lot.

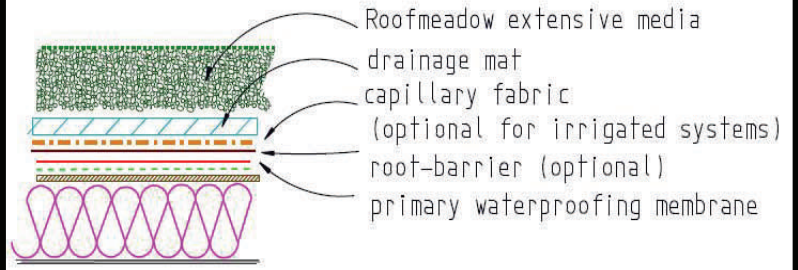
Ecological, Aesthetic, and Financial Benefits:

- Controlling stormwater runoff
- Preventing erosion and pollution
- Improving water quality
- Increasing the service life of the roof
- Creating wildlife habitat.

Another sustainable technology at SCEE is a solar panel that saves the Center approximately \$1,600 annually on electricity costs

The Schuylkill Center's Flower Carpet

- General-purpose growth/drainage media layer installed
- Specialized fabric drainage mat composed of 100% recycled material
- Includes non- or semi-deciduous species of Sedum and Delosperma (succulent plants adapted to the temperate climate)
- Maximum plant height is 24 inches
- Minimal maintenance required



Type I Roofmeadow
Roofscapes, Inc.



A 2" thick Type I Roofmeadow® Flower Carpet, the thinnest type of vegetated cover, was selected due to constraints on the existing roof weight. The Flower Carpet green roof is pitched 2:12, the maximum stable pitch for unsupported green roof covers.

A model green roof with the same soil and plant medium will be installed in the Spring of 2007 to provide further education opportunities. This will allow visitors to see and feel the green roof from the ground in front of the main education building.

Quantifying the Benefits

Once the Sedum plants establish enough growth to absorb substantial amounts of water, The Schuylkill Center will install instrumentation to quantify the difference in stormwater runoff between the two varying roof sections in the spring of 2007. The monitoring system design is a result of collaboration between the Philadelphia Water Department and the Schuylkill Center for Environmental Education. It includes a gutter system that diverts runoff into calibrated barrels where the volume of stormwater will be regularly monitored.

Runoff from the green roof is channeled into the rain garden below on the ground.

Rain Garden Plants Include:

- Switch Grass
- New England Aster
- Swamp Rose
- Three-lobed Coneflower
- Red Cedar
- Joe-Pye Weed
- Hibiscus
- Ninebark
- Giant Sunflower
- Lizard's Tail

