Establishment of an innovative stormwater system was completed in Shadybrook Park in Meadville, PA. The project, a collaboration between Allegheny College and the City of Meadville, addresses environmental challenges, fosters community capacity and serves as a demonstration for future efforts along Mill Run, a historically significant stream in Meadville. The revitalization of this city-owned park provides resolution for long standing drainage and water saturation issues, where an estimated 19 acres of stormwater runs into the park.

**Project Overview**

The project has facilitated development of a more useable park through the demonstration of best management practices for stormwater mitigation, groundwater recharge and innovative plantings, and creation of amenities to improve park usability and ecology.

**Sustainable Practices**

**Water**- The new stormwater system has resulted in the proper filtering of an estimated 19 acres of runoff that drains into the park. Stormwater entering the system first collects in a forebay pool, where it passes into a sculpturally articulated system, flowing next through a layer of wetland meadow plants and grasses designed to aid in water purification. From here the water permeates into a mixture of sand and other filter media, all designed to capture sediments, metals, hydrocarbons, and other pollutants. A low sculptural berm holds back excess water, ensuring that the stormwater moves through the filtration system before flowing into Mill Run. The entire system emulates a natural wetland system for water purification.

**Natural Landscaping**- Landscape plans prepared for the project include a wetlands meadow, composed of warm season grasses, wildflowers and other native plantings within the stormwater filter area. Additional trees and shrubs were planted alongside the ADA accessible trail. This work reduced the amount of turf lawn in the park and resolved an issue of improper drainage in the filter area, resulting in a more useable park area.

**Green Design and Construction**- Streambank restoration and stabilization was achieved in three areas of significant erosion by stacking a double layer of sandstone and stone materials salvaged from the demolition of the old south access stairs along the stream bank.

The City of Meadville has adopted a maintenance plan for the park, which allows for significant reduction in mowing.
Sustainable Practices Cont.

Connecting People to Nature- Children can access the stream and explore a wetland habitat. Interpretive signs educate about the stormwater filtration system and provide relevant historical information.

The south access steps were completely rebuilt, providing connectivity between several diverse neighborhoods in Meadville. Murals were developed for the park’s composting toilet facilities, once covered with graffiti. Designed in collaboration with local youth, these and other murals in the park represent local flora and fauna, as well as important figures from Meadville’s history.

Information provided by: Amara Geffen, Director, Allegheny College Center for Economic & Environmental Development (2011)

Project Partners/Consultants

- Allegheny College, Center for Economic & Environmental Development
- Local Senior High School