

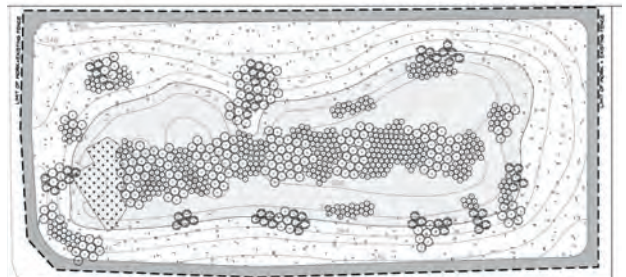
## Stormwater Basin Retrofit for East Whiteland Township, PA

*Valley Forge Trout Unlimited, Township of East Whiteland, Pennsylvania, 2006*

As part of a larger effort to address the environmental impacts of development on the Valley Creek watershed, Viridian Landscape Studio worked with Cahill Associates to retrofit a conventional stormwater detention basin in East Whiteland Township, PA. The client, Valley Forge Trout Unlimited, received \$18,000 in grants from the National Fish and Wildlife Foundation and the Valley Creek Trustee Council to cover design, implementation, and outreach for basin naturalization and retrofit. The basin was re-graded and its outlet structure raised to hold six inches of water for two to three days after small storms. The planting design by VLS used native species able to tolerate fluctuating water levels and periods of inundation, similar to conditions found in riparian and floodplain ecosystems. The combination of increased retention time and naturalized plantings allows more water to infiltrate back to groundwater and pollutants to be removed before the stormwater exits the basin. The trees and shrubs will also reduce the total volume of stormwater through evapotranspiration. Unlike conventional detention basins planted in exotic turf grass, this basin retrofit will provide native habitat while improving stormwater quality.



*Volunteers planted 300 live stakes and 200 container-grown trees and shrubs. After planting, the basin was seeded with wet and dry native meadow mixes.*



*To ensure success of the project, the township was given a Two-Year Maintenance & Monitoring Plan for the establishment period of the plantings.*



*Live stakes (foreground) are simple to install and provide an inexpensive way to provide rapid shrub cover in the basin. Once established, the stakes will also provide structural reinforcement at the inlet, preventing the loss of soil during high-velocity flows.*