

# Carriage Hills Stormwater Restoration

Annapolis, Maryland



*This project was the first American Recovery and Reinvestment Act restoration project to be implemented in Maryland.*

A severely incised and unattractive tributary to Clements Creek was experiencing erosion and sedimentation resulting from unstable soils and a stormwater dominated hydrologic regime. Areas in its flow path were also dominated by invasive plant species such as multiflora

rose and honeysuckle. Outside of the flow path, relatively mature woodlands persisted 15 to 20 feet above the invert of the channel.

Biohabitats developed a restoration design which used a regenerative stormwater conveyance approach to convert

the incised and headcutting outfall channel into a stable seepage wetland ecosystem well linked to its historic floodplain. The restoration provides stable conveyance and water quality treatment of stormwater flowing to Clements Creek. By recharging the groundwater table, this approach also helps support a number of threatened plant species associated with Anne Arundel County's native acid seep wetland systems.

Biohabitats' restoration design package included cost estimates, construction details, specifications and

implementation guidance (e.g. sequence of operations, operation & maintenance). The designs were approved by state and local authorities and the project was constructed in one month.

## SERVICES

- Inventory & Assessments
- Design
- Permitting
- Construction Procurement
- Construction Oversight
- Construction Management

*conservation planning*  
*ecological restoration*  
*regenerative design*



800.220.0919  
www.biohabitats.com

