HOWARD COUNTY STORMWATER MANAGEMENT DIVISION

Ecological Restoration Monitoring for Howard County MD

Howard County, MD

From top: Monitoring at Bonnie Branch; Checking stationing for longitudinal profile at Davis Branch

Post-construction monitoring of stream restoration projects helps ensure that both goals and permit conditions are met.

Having designed the restoration of four Howard County, Maryland streams that flow to the Patapsco River, a major tributary of the Chesapeake Bay, Biohabitats is now conducting post-construction monitoring of ensure that they are meeting the standards required by Maryland Department of the Environment and U.S. Army Corps of Engineers permits. The restoration projects were undertaken to restore channel stability and help the County meet its Ms4 and TMDL goals.

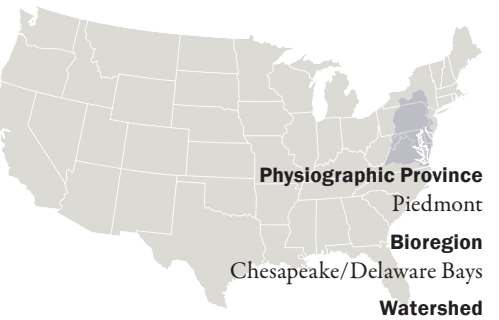
Biohabitats is providing five years of annual monitoring on a tributary in Dorsey Hall Village; three years of annual monitoring on Bonnie Branch; and five years of biennial monitoring along Davis Branch and Rockburn Branch. In total, Biohabitats is monitoring approximately 6,200 linear feet of stream. At each site, Biohabitats surveys native and non-native invasive vegetation, uses drone aerial to document the amount of forest canopy established post-construction and overall stream condition, conducts a habitat assessment using the EPA's Rapid Bioassessment Protocol, and visually inspects and photo documents the entire restoration area under baseflow conditions as well as following a significant storm event.

For the Bonnie Branch, Davis Branch and Rockburn Branch projects, Biohabitats surveys representative cross-sections and longitudinal profiles to document vertical channel stability and evaluates bank height ratio to determine floodplain connectivity. At Davis and Rockburn Branches, Biohabitats conducts Bank Erosion Hazard Index (BEHI) to document lateral stability.

For each project, Biohabitats prepares an annual (or biennial, in the case of Davis Branch and Rockburn Branch) reports documenting overall project success, vegetation species composition, vegetation viability, non-native invasive species presence, the identification of problem areas (structure failure, bank erosion, lateral migration), and proposed remediation measures, as necessary. To date, invasive species control at all sites has been the only recommended remedial action.

SERVICES

Assess
Monitor



Physiographic Province
Piedmont

Bioregion
Chesapeake/Delaware Bays

Watershed
Patapsco

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