Anne Arundel County

Susans Branch West Stream Restoration

Anne Arundel Couinty, Maryland

Stream restoration stabilizes and enhances the ecological function of a suburban stream while reducing pollutant loads in the Chesapeake Bay.

SERVICES
Ecological Restoration

Susans Branch, a tributary within the South River and Chesapeake Bay watersheds, flows through the Heritage Harbor Community of Annapolis. It is a highly eroded headwater system, making it a source of nutrient and sediment loads to Broad Creek, a tributary to the South River.

In an effort to restore stability, ecological function, and floodplain connectivity to the degraded stream while also supporting their NPDES MS4 permit requirements, the Anne Arundel County Department of Public Works turned to the Biohabitats/ Century Engineering Joint Venture (JV) for help.

The JV team began by conducting detailed site assessments, which included hydrologic and two-dimensional hydraulic analyses. The JV then summarized findings in a Watershed Assessment Report and developed concept design alternatives. The selected concept uses a valley restoration approach in which reconnection between the restored channel and adjacent floodplain is achieved by the creation of a valley-wide regenerative stormwater conveyance (RSC system). This approach emphasizes full use of the broad floodplain area in the downstream portion of the project.

The JV developed 30%, 60%, and final design plans and documents. The final design consists of a valley-wide RSC system to introduce widespread surface water across the floodplain, providing wetland restoration and creation and maximizing water quality improvement. The proposed valley-wide RSC will also provide habitat complexity for a diverse variety of aquatic and terrestrial wildlife. Final design is anticipated in Summer 2023 with construction likely in 2024.