



# Brookside Country Club

## Stream and Floodplain Restoration

### Challenge

Swabia Creek flows through the golf course at Brookside Country Club. The creek has a long history of flooding, causing property damage and severe bank erosion. Lost playing time and course damage were frequent and costly problems for the country club. The challenge for LandStudies, Inc. was to improve stream stability while limiting flood damage to the course and improving the overall aesthetics.

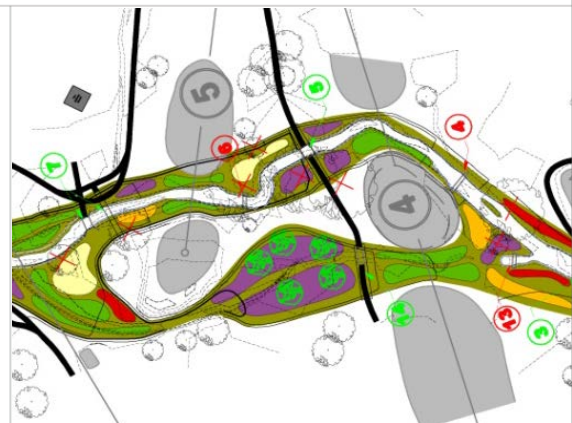
### Solution

LandStudies, Inc. evaluated the channel slope and geometry, stream bed sediment size and transport potential for Swabia Creek. Using natural channel design techniques LandStudies developed a design that created a stable channel and floodplain configuration, while improving the creek's alignment with bridges throughout the course. As part of the design, LandStudies, Inc. lowered the floodplain to more closely match historic riparian conditions. This expanded the floodplain storage in strategic storage locations, reducing shear stress on the bed and banks, while reducing flooding impacts to the course and improving water quality by reducing sediment loads in flood waters.

### Services

Geomorphic Assessment | Landscape Design | Engineering | Permitting | Landscape Installation | Construction Management

Client: Brookside Country Club  
Location: Macungie, Pa



Planting Plan



Pre-construction



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