



After

# Big Spring Run

## Stream and Floodplain Restoration

### Challenge

The Big Spring Run tributary is a headwater system that has been impacted by historical human activities. Big Spring Run became characterized by severe streambank erosion and stream bed degradation, with the nutrient-rich sediment released through these erosional processes affecting downstream water quality.

### Solution

Environmental engineers, geologists, botanists, landowners and F&M students provided 8 years of scientific research and monitoring that allowed LandStudies to design this project to improve water quality in the watershed, enhance wildlife habitat, and provide added flood volume storage by returning the bottom of the stream valley to its historic condition, creating a wetland-meadow valley bottom complex.

The project removed 21,721 cubic feet of legacy sediment, restored 1,479 linear feet of stream valley and 3,074 linear feet of stream channel. LandStudies surveyed and developed design/construction documents, prepared permit applications and coordinated with federal, state, and local agencies to obtain approval to construct the project in compliance with clean water laws.

Now completed, the project improves water quality downstream, provides improved wildlife habitat, and provides added flood storage volume. LandStudies served as Prime Contractor, responsible for all on-site activities including construction services, E&S control installation and planting services, routine post-construction inspections to evaluate site stability and vegetation establishment, and post-construction maintenance to promote indigenous vegetation and suppress invasive species competition.

### Services

Geomorphic Assessment | Engineering | Permitting | Construction | Construction Management | Erosion Control, Native Seed, and Native Plant Installation



During Construction



Before

Client: Pennsylvania Environmental Council  
Location: Lancaster County, PA



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