

# Silver Creek Stream Restoration Design-Build

Russell Township, Ohio



*from top: Restored oxbow wetland; Restored channel*

*Thanks to an integrated restoration program Silver Creek will flow through a natural forest and provide ideal habitat for trout and other aquatic life.*

Silver Creek was impounded in 1925 to form Silver Lake, which provided power for a small mill. The lake spanned 14 acres, capturing water from a 10.5 square mile watershed. In 1994, when the Geauga Park District acquired the lake, the Ohio Department of Natural Resources ordered the dam be removed because it was detrimental to trout habitat. The Geauga Park District dismantled the dam in 1996. In September of that same year, remnants of Hurricane Fran delivered rainfall that created the wettest month on record. The record high flows caused extreme erosion through the newly created channel in the former lake bed and large quantities of sediment deposition in the channel downstream.

After the channel continued to experience erosion for six years, the Geauga Park District retained Biohabitats to design

and restore Silver Creek to a stable, natural channel. Using an upstream section of Silver Creek as a reference reach, Biohabitats designed a more stable channel cross section, plan form, and profile. Because the soil in the old lake bed was easily eroded, the design incorporated wood structures such as rootwads, large woody debris deflectors, log toe, and log vanes to stabilize meander bends. Portions of the old channel were converted into wetlands to mimic natural oxbow channels. Native riparian trees, shrubs, grasses, and flowers were planted throughout the project area.

## SERVICES

Inventory and Assessment  
Design  
Permitting  
Construction Management  
Construction Oversight  
Post-construction Monitoring  
Design-Build  
Public Outreach

conservation planning  
ecological restoration  
regenerative design



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