

Turtle Creek Stream Bank Stabilization

Design Features: stone deflectors, riparian buffer, tree planting

Date of Installation: Fall 2016

Location: banks of Turtle Creek along the Westmoreland Heritage Trail from Franklin Township Municipal Sanitary Authority to Meadowbrook Road, Murrysville

Client: Westmoreland Conservation District

Cost: \$92,963

Project Partners: Turtle Creek Watershed Association, Westmoreland County Bureau of Parks and Recreation, Regional Trail Corporation, Westmoreland Heritage Trail, Westmoreland Conservation District, Franklin Township Municipal Sanitary Authority, Westmoreland County Industrial Development Corporation

Project Contact: Chelsea Walker,
Chelsea@wcdpa.com

Project Specifications

The Westmoreland Heritage Trail's Phase III expansion from Murrysville to Trafford runs along the banks of Turtle Creek, but before they were stabilized there was extreme erosion encroaching upon the trail adding tons of sediment pollution to the creek.

The Westmoreland Conservation District headed the project and provided technical assistance and project management. Funds were acquired from a Growing Greener grant to stabilize the five sections of stream bank that were the most severe.

Invasive Japanese Knotweed that was covering large portions of the project sites was removed to clear the area. Best management practices (BMPs) were installed along the banks, which consisted of over 2,000 tons of rip-rap that would armor the bank from future erosive forces from the flowing water. Riparian buffers of trees were planted to further stabilize



The erosion along Turtle Creek's banks was so severe on parts that it was beginning to undercut the railroad itself



The exposed railroad ties are evidence of how much soil has eroded off of the banks

the stream banks along with seeding and mulching all disturbed areas.

Benefits

Five project locations along a 2.2 mile stretch of trail totaled over 1,000 feet of stream bank stabilization. Each location previously polluted Turtle Creek with around 200 tons of sediment, so the stabilization project prevents over 1,000 tons of sediment eroding off of the banks into the creek.

Turtle Creek Stream Bank Stabilization



Eroding section of stream bank along what would become another section of the Westmoreland Heritage Trail



Three years after stream bank stabilization (along with the new section of the Westmoreland Heritage Trail)



Stream bank before stabilization



Same section three years after stabilization

Turtle Creek Stream Bank Stabilization



Note the exposed tree roots which are evidence of erosion



The same tree after the bank was stabilized