Westmoreland Conservation District

Watershed Restoration

Irwin Park's Parking Lot and Streambank Stabilization

Design Features: Graded stream banks, armor toe of slope with rip-rap, single log vane deflectors installation, and two infiltration swales

Date of Installation: 2022

Location: Irwin Park, Irwin Borough, Westmoreland County

Client: Irwin Borough

Cost: $85,756.00 of Growing Greener nonpoint Source Grant funds were used with a cash match of $11,220.50 match from the Richard King Mellon Foundation. Additional in-kind and cash match of $10,943.63 from Irwin Borough. The total cost of this project is $107,920.13

Project Partners: Westmoreland Conservation District, Irwin Borough, and the Richard King Mellon Foundation

Project Contact: Chelsea Walker, chelsea@wcdpa.com

Parking lot retrofitted into two infiltration swales with large rock as natural guide rail.

Project Specifications

This project aided in stabilizing approximately 450 feet of eroding streambank along an unnamed tributary (UNT) to Tinkers Run within the Turtle Creek watershed. The Irwin Borough reached out to the district for assistance because of the severe erosion in close proximity to the walking trail. In stabilizing the stream banks, ten single log vane deflectors and graded stream banks to a gentle slope and installed rip-rap reduced accelerating erosion along the UNT. Trees and shrubs were planted along the streambank to restore a native riparian buffer. In addition, some of the park's parking lot near the stream was retrofitted into two infiltration swales. These installed swales captured stormwater runoff from a 22,000 square foot parking lot. This decreased stormwater runoff from this impervious area from entering the stream.

Benefits/Performance Measures

Irwin Park was impaired by accelerated streambank erosion and stormwater runoff from the park's parking lot. The Best Management Practices installed prevented additional sediment and pollutants flowing to this waterway. The log vanes help to direct streamflow into the middle of the channel and stabilizes the bank. The infiltration swales use an engineered soil mix that captures pollutants' runoff form the parking lot and allows for it to soak into the ground before entering the stream.

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(Before) Eroding and vertical banks causing sediment to enter the stream

(After) Banks graded back to a stable slope and single log vane deflectors (10) installed to stabilize eroding streambank.

(Before) Eroding and vertical banks causing sediment to enter the stream.

(After) Banks graded back to a stable slope and rock added to the toe of the slope.