

## Wolfpack Park Stream Restoration

**Design Features:** rock cross-vanes, j-hook rock structures, streambank grading, riparian buffer

**Date of Installation:** 2010, 2012

**Location:** Wolfpack Park, Lower Burrell, PA 15068

**Client:** Pucketa and Chartiers Watershed Association

**Cost:** \$74,775

**Project Partners:** Pucketa and Chartiers Watershed Association, Westmoreland Conservation District (WCD), PA Department of Environmental Protection, City of Lower Burrell, Tri-County Trout Club

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*Rock cross-vane installed in the Chartiers Run to redirect the flow of water back to the center of the channel*

### Project Specifications

The project area of Chartiers Run within Wolfpack Park had been heavily affected by high-flow storm-water runoff events. The stream had begun to down cut and widen, which led to sediment deposits further downstream to shift the base flow of the stream. Major erosion of the banks was negatively affecting the water quality of Chartiers Run.

The Westmoreland Conservation District provided technical assistance and project management for this project. Funds were acquired through a PA DEP Growing Greener grant to install the Best Management Practices (BMPs) that would correct the base flow and improve water quality in the stream.

In the summer of 2010, around 1,000 feet of streambank was stabilized by installing five rock cross vanes and four rock j-hook structures. The streambank was graded to a shallower slope and riparian buffers made of various native trees, shrubs, and grasses were planted to prevent further erosion.

In 2012, flooding moved a few large rocks placed during the stabilization project in 2010. WCD was granted a Western Pennsylvania Coalition for Abandoned Mine Reclamation (WPCAMR) Quick Response grant of \$800 to reposition these rocks, which protected the longevity and effectiveness of the project.

### Benefits

The correction of the base flow in this section of Chartiers Run ultimately improved the water quality by reducing the amount of sediment entering the stream from bank erosion and encouraging sediment transportation along the streambed to restore a more natural aquatic channel and habitat.

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*Section of Chartiers Run before construction*



*Section of Chartiers Run after construction and riparian buffer planting*



*Rock structures in Chartiers Run six years after construction*