

Valley High School

Design Features: Stream improvements, debris basin, permeable parking surface,

Date of Installation: 2008-2012

Location: Valley High School
707 Stevenson Blvd.
New Kensington, PA - 15068

Client: New Kensington-Arnold School District

Cost: \$ 400,000

Project Partners: Pucketa and Chartiers Watershed Association, the New Kensington-Arnold School District, the Municipal Sanitary Authority of New Kensington, Westmoreland County, PennDOT, Growing Greener/ Department of Environmental Protection, and the Colcom Foundation.

Project Contact: Rob Cronauer,
Rob@wcdpa.com



Little Pucketa Creek before work began, showing how the stream channel was clogged with sediment — so much so that it had created a small, island in the stream and left only a very narrow channel for the water to flow through.



After nearly 2,000 tons of sediment was removed and the insulation of 14 rock vanes deflectors to improve stream flow and reduce the amount of sediment dropping out in the flood control channel, thus increasing capacity.

Project Specifications

In 2004, when the remnants of Hurricane Ivan passed through, Little Pucketa Creek flooded the Valley High School property and nearby neighborhoods. The Westmoreland Conservation District identified the flood prone issues and in 2008 began implementing a series of projects that would improve water quality in Little Pucketa Creek.

This project took four years to complete with several phases that focused on a portion of Little Pucketa Creek near Valley High School in New Kensington. A variety of conservation measures were utilized at this site, including stabilizing eroding streambanks, adding 14 rock deflectors to centralize the stream's velocity, removing nearly 2,000 tons of sediment from the stream channel, and adding a one-acre debris basin. An unused tennis court was also converted into a storm water infiltration parking lot that provided 39 additional parking spaces on the school's property.

The debris basin was the last phase of the project to be completed to relieve flooding along Little Pucketa

Creek. The bowl-shaped area of land, is about one acre in size and is located at the far end of the high school property, between the athletic fields and Route 56.

The basin acts like the strainer in your kitchen sink, catching pollution – anything from soil to litter – that the creek has picked up as it flows along. Catching pollution at this point in the stream's course prevents it from clogging up downstream near the high school, and contributing to flooding problems.

Benefits

The strategically placed rock vane deflectors and debris basin have aided in proper stream flow, which has reduce the amount of sediment dropping out in the flood control channel, thus increasing capacity and decreasing flooding potential to the school and nearby neighborhoods. In addition, the stormwater infiltration parking lot with permeable pavers will allow stormwater to soak into the ground instead of running over hard surfaces, picking up pollutants on its way, and emptying into Little Pucketa Creek.

Valley High School



This Stormwater infiltration parking lot has reduced stormwater runoff and decreasing the volume of water to Little Pucketa Creek.

Valley High School



Constructed debris basin aids in the reduction of debris accumulating in the flood control channel in front of the school.



Debris Catcher is designed to trap large debris from continuing downstream and divert it into the debris basin.