

Sherrick Run Stream Mitigation

Design Features: rock cross vanes, j-hooks, riparian buffer, removal of concrete-lined channel, rock aprons, sediment baffles

Date of Installation: 2017

Location: along Old Rte. 119 in East Huntington Township, Westmoreland County

Client: Westmoreland Conservation District & Pennsylvania Department of Transportation (PennDOT)

Cost: \$210,000

Project Partners: Westmoreland Conservation District, PennDOT

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Stream monitoring in progress as benthic macro invertebrates are being collected

Project Specifications

In 2017, PennDOT needed additional stream mitigation performed to accommodate construction of their State Route 519 and 1055 intersection and Interstate 70 highway project. They partnered with the Westmoreland Conservation District to complete stream mitigation on a section of Sherrick Run, which at the time was a concrete-lined channel that is a tributary to Jacobs Creek.

The Westmoreland Conservation District provided technical assistance and project management for this project that would improve the existing aquatic habitat and water quality. Funds were acquired from PennDOT through a combination of state and federal funds to meet their stream mitigation commitment.

Various Best Management Practices (BMPs) were implemented at the site after over 1,000 feet of existing concrete channel lining was removed. Rock aprons were installed at the outlets of the existing pipes along the channel. In addition, nine rock cross vanes and two j-hooks were installed along the stream bed, and 10 sediment retaining baffles were installed in the pipe that carries Sherrick Run under Route 119. Trees and shrubs were planted in a riparian buffer along the banks, and stream monitoring will

be performed for five years following the construction of the stream mitigation project.

Benefits

50 trees/shrubs and 200 live willow stakes were planted to stabilize the stream bank, and there is currently a 100% survival rate for the trees and shrubs and a 75% survival rate for the live stakes planted. The fourth water sampling site is upstream of the project location and shows a fair to good water quality rating based off of the benthic macro invertebrates collected. This shows the potential for these macro invertebrates to move downstream within the PennDOT mitigation project area in the future. Further monitoring of macro invertebrates, water chemistry, and physical habitat will hopefully lead to increasingly improved water quality ratings as the impacts of construction diminish. The riparian buffer plantings have decreased the water temperature and sedimentation into Sherrick Run, as well as stabilized the stream banks. Furthermore, the concrete removal, rock cross vanes, and j-hooks have improved the stream habitat by creating a natural stream corridor with a series of pools and in-stream cover for aquatic life.

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Sherrick Run before mitigation; note the concrete channel lining



Sherrick Run after mitigation; there is now a natural stream bed and riparian buffer plantings along the banks