

Lydick Farm Sink Hole

Design Features: Riparian buffer, rip-rap, restoration of stream channel, updated and upgraded cross pipes

Date of Installation: 2008

Location: Route 982, Derry Township

Client: Loyalhanna Watershed Association

Cost: \$50,000

Partners: Westmoreland Conservation District, Loyalhanna Watershed Association, PA Department of Environmental Protection, DEP Bureau of Abandoned Mine Reclamation

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Project Specifications

Many years ago, the area underneath Stony Run stream at the Lydick Farm was mined very shallowly for coal, and once it was abandoned, the mine subsided becoming a 20-foot-deep sinkhole. The stream disappeared into the hole and began carrying AMD into the stream, depositing iron and other pollutants.

The Westmoreland Conservation District provided technical assistance and project management for this project that complemented the DEP Bureau of Abandoned Mine Reclamation's efforts to eliminate around 500 acres of surface water from entering the underground abandoned mine. The District received funds from a Growing Greener II County Environmental Initiative grant to work on this project.

The stream channel was restored to its historical location by excavating the streambed and returning the water to its original path on the surface of the ground. Rip-rap was used to stabilize the sides. Four stream crossings were installed with cross pipes to allow for the increased volume of water in the streambed to pass under the road crossings. The sinkhole was filled, and riparian buffers were planted in 2010.



Empty sinkhole before mining and sealing of site



Re-mining in process at the sinkhole before sealing

Benefits

The restoration reconnected the 500 acres of headwaters to the rest of the watershed, minimized AMD pollution, and improved the water quality in Stony Run and the surrounding watershed by heavily decreasing the amount of pollutants carried into the stream. The 10 trees planted for the riparian buffer increased stabilization of the stream bank and contributed to improved water quality as well.

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Old cross pipe and streambed before restoration began



Installation of upgraded cross pipes at one of the four stream crossings



Finished cross pipes carrying Stony Run under a driveway