

BRINKERTON TREATMENT IRON REMOVAL AND SYSTEM UPGRADES

GROWING GREENER

PROJECT DESCRIPTION: The Westmoreland Conservation District partnered with the Sewickley Creek Watershed Association to provide extensive maintenance to the passive mine treatment system. This system is located near the small town of Brinkerton, in Mount Pleasant Township, Westmoreland County. It was constructed in 2005 and has had some minor improvements through the years. This project provided for the system's first major iron sludge removal. A sludge basin was constructed, and the accumulated iron was pumped to the adjacent basin. With the iron sludge removed from the treatment cells, the system will continue to maintain the capacity needed for additional iron removal from the mine discharge, before it enters Sewickley Creek. Additional improvements included the installation of a permanent sludge pipeline, invasive species removal, and testing of a oxidizer to improvement efficiency of iron removal.

PROJECT GOALS: The purpose of this project was to provide much needed maintenance to the system so it can continue to remove iron and other pollutants (metals) from the mine drainage and prevent it from entering Sewickley Creek.

PROJECT RESULTS: Over 2000 tons of iron was removed from the treatment cells and transferred to a sludge basin. This will allow the system to maintain its 80% iron removal efficiency. At 80% effectiveness the system prevents 700 lbs/day of iron from entering Sewickley Creek.



Mine Discharge (right), flowing (left) into the 8 acre treatment system

PROJECT COSTS: \$270,000 of Department of Environmental Protection, Growing Greener Nonpoint Source Grant funds were used with an in-kind match of \$11,432 from the Westmoreland Conservation District. Additional in-kind match of \$57,161 from Sewickley Creek Watershed Association, \$4,300 from Mount Pleasant Township, and \$3,084 from Hedin Environmental Inc.

The total cost of this project is \$341,677

LESSONS LEARNED: Partnerships and community support are vital in working together towards a common goal and vision.

PARTNERS: Westmoreland Conservation District, Sewickley Creek Watershed Association, Mount Pleasant Township, and Hedin Environmental Inc.

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