

The Poplar Run Repair and Maintenance Project
Growing Grant Program #C990002494
Sponsor: The Trust for Tomorrow

Project Description

The Poplar Run Stream Restoration Project was originally constructed in 2015 using Growing Greener Plus funding, restoring 4,800 feet of stream and 16.2 acres of buffer in Blair Township, Blair County, Pennsylvania. Due to persistent high flows in 2018, several areas of repair and maintenance needs developed along four distinct areas of the stream; repairs were needed to maintain the integrity of the restoration project and maintain the water quality and habitat benefits for which it was designed.

- At Area #1, a large fallen tree had pulled up its roots and severely damaged the bank behind it. The tree was removed and the eroded bank filled to bring the banks back to consistent width.
- At Area #2, high-velocity flows eroded the bank behind two log vanes along a large curve, resulting in approximately 12 feet of lateral erosion. The log vanes were removed and 110 linear feet of mudsill cribbing were constructed in their place. The structures will slow down the flow adjacent to it and keep the flow away from the vulnerable banks behind them.
- At Area #3, a log vane was undermined by high flows and was diverting flow into the river right bank. The eroded pocket that resulted was filled in to bring the stream back to its asbuilt alignment. The log vane was re-set and re-aligned to its original orientation and reinforced with larger rock to keep it from being undermined from future high flows.
- At Area #4, in an area that is susceptible to backwater from the flooding of the Frankstown Branch of the Juniata, recurring flooding had resulted in extensive erosion and resultant sediment dropping out when flood waters receded, leaving large gravel bars throughout this reach. The excess gravel was moved back to the eroded bank, and an additional log vane was added to this section to improve the stream flow around the bend.



Each of these repaired areas will be planted with a mixed forest buffer to further stabilize the stream and bring additional habitat to the system.

Project Goals

The goal of this project was to bring the former stream restoration project back to its original level of stability and function, preserving the water quality and habitat benefits of this High Quality Cold Water fishery.

Project Results

Along the four sections of stream, 546 linear feet of stream were restored by filling eroded areas and re-aligning the stream to its original asbuilt configuration. A total of 2 log vanes were removed, 1 log vane realigned, 1 new log vane constructed, and 110 feet of mudsill were installed for bank protection and habitat improvement. Mixed species of trees and shrubs will be planted in the new bank areas to make them more resistant to erosion.

Through these project activities, 36.7 pounds of nitrogen, 26.0 pounds of phosphorus, and 47.5 tons of sediment were prevented from being delivered annually to the Chesapeake Bay.

Project Costs \$40,000 Restoration Grant

Lessons Learned Lessons were learned about the placement of in-stream structures in a high energy stream; the standard practice of using a log vane immediately before a mudsill has been re-evaluated when working in this type of scenario.

Partners The U.S. Fish and Wildlife Service; Blair County Conservation District; California State University.

Contact Information The Trust for Tomorrow, April Temple; (252) 337-5475; aprtemple@trustfortomorrow.org