

PROJECT DESCRIPTION The Chiques Creek Stormwater Basin, Streambank Stabilization and Riparian Buffer Project improves local water quality by reducing the sediment and nutrient loads delivered to the Chiques Creek which is impaired due to siltation/sediment from agricultural sources (PA DEP 2022 Integrated Report). The existing stream channel was characterized by an unstable channel with low to moderate eroding banks. Additionally, the stream corridor was directly accessible by grazing livestock on both sides of the stream. To minimize streambank sedimentation, exclude grazing livestock, and restore the stream channel, West Hempfield Township installed the following:

• 22 rock cross vanes	• 11 boulder walls	• 100 native trees and shrubs / riparian seed mix
• 3 rock deflectors	• 3 livestock crossings	• 1 stormwater basin



06/17/2020 - BEFORE: Riparian Corridor at Livestock Crossing



05/11/2023 Rock Cross Vane, Seeded/Stabilized Streambank, and Tree Seedlings



08/15/2020 - BEFORE: Eroded Stream Channel



06/02/2023 Livestock Crossing and In-Stream Structures

PROJECT RESULTS The calculated pollutant reductions achieved are sediment 108,996 lbs/year, phosphorus 60 lbs/year, and nitrogen 431 lbs/year. The result of these reductions is:

- Improved water quality
- Increased biodiversity, ecological balance, and food and habitat for native wildlife species

PROJECT PARTNERS This project supports the goals of the 2017 West Hempfield Township Pollutant Reduction Plan and PA DEP's Phase 3 Watershed Implementation Plan (WIP).

PROJECT COSTS \$591,000 funded by a \$250,000 PADEP Growing Greener grant, a \$200,000 NFWF Grant, and a \$141,000 Township cash match

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