

Cocalico Creek Floodplain Restoration Construction – Project Summary

Grant Project Number: 201912203339

Grantee: Conservation Foundation of Lancaster County (CFLC)

April 12, 2022; REV 1 July 10, 2022

Project Description

The Cocalico Creek Floodplain Restoration restored the floodplains of Cocalico Creek and its unnamed tributary (UNT) in West Cocalico Township, Lancaster County, Pennsylvania on property owned by both Middle Creek Wildlife Management Area and a private landowner. The project consists of legacy sediment removal and floodplain restoration along 3,867 linear feet (LF) of degraded stream channel – 3,369 LF along Cocalico Creek and 498 LF of the unnamed tributary (UNT) to Cocalico Creek.

Project Goals

The purpose of the floodplain restoration project was to restore the floodplain to historical ecological conditions as closely as possible while accommodating existing site constraints. The approach included removing the legacy sediment impairment from the floodplain, creating an anastomosed channel system well-connected to the historic floodplain, and establishing native vegetation.

Project Results

Impaired Stream Restored – 3,867 LF

Legacy Sediment Removed – 18,000 CY

Invasive Species Treatment – 25 Acres

Riparian Plantings – 12.7 Acres

Floodplain Restoration – 8.2 Acres

Annual Pollutant Load Reductions – *using Protocol 1 of Expert Panel Protocols w/o SDR*

Sediment – 709,241 lbs TSS/yr

Nitrogen – 809 lbs TN/yr

Phosphorus – 372 lbs TP/yr

Lessons Learned

Winter construction was required (from November 1 to April 1) in accordance with Bog Turtle Avoidance and Minimization Measures. As a result, there were several issues that arose from the colder weather including thick ice that made fine grading operations and matting installation difficult, caused machinery and equipment issues, and delayed germination of seed. Several instances of substantial snowfall also delayed grading operations due to site conditions. We will use our experience from construction of this project to more accurately forecast schedule, budget, and plan and prepare for possibly delays if future project require construction during the winter months.

Partners

West Cocalico Township, LandStudies, Inc., PA Dept of Environmental Protection Growing Greener, Conservation Foundation of Lancaster County, Joshua Martin (Landowner), PA Game Commission (Landowner)

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Figure 1: Cocalico Creek and UNT at Confluence (Before)



Figure 2: Cocalico Creek and UNT and Confluence (After)