

Willis Farm Stream Stabilization and Fencing
Growing Greener Project # C990003018
Grantee: Greene County Conservation District

PROJECT DESCRIPTION

The Willis Farm is located on the unnamed tributary of Pumpkin Run. The unnamed tributary to Pumpkin Run that flows through Mr. Willis' farm is designated as a Warm Water Fishery and is listed as impaired under category 5 of the 303d list in the 2020 Integrated Report (Reach Code 05020005001238). The project was designed, permitted, and constructed to implement 1,200 ft of streambank stabilization, and fencing along the resorted section, develop 3 off-stream water developments, and install an animal stream crossing to reduce the sediment and nutrients into the unnamed tributary of Pumpkin Run. These four best management practices will allow cattle exclusion from Pumpkin Run's impaired section.

PROJECT GOALS This project aimed to reduce sediment and nutrient; specifically nutrient and phosphorous loads from the agricultural activities on the unnamed tributary of Pumpkin Run.

PROJECT RESULTS The pre-construction sediment and stream study measured the pH, temperature, and specific conductance, and a bioassessment habitat assessment was performed. The results indicate the conductance was relatively high at 911 $\mu\text{S}/\text{cm}$, but the pH was 7.48. The temperature of 25 °C was consistent with the unnamed tributary of Pumpkin Run being a warm water fishery. In addition, the HBI score was measured at 5.17 and the habit score was 74. Due to the inflation cost of materials and the lack of remaining funds in the grant, the scope of work was amended to remove the post-construction sediment study.

Type of Pollutant	Pre-construction Measures	Estimated Post-construction Measures
Sediment	1,651,734 lbs	175,993 lbs
Nitrogen	8,796 lbs	479 lbs
Phosphorus	2,788 lbs	264 lbs

PICTURES

Before Construction (Streambank)



Figure 1: The photo above shows the eroded streambank before construction.

Post Construction (Streambank fencing)



Figure 2: The photo above shows the new streambank exclusion fencing and stream stabilization.

PROJECT COSTS \$171,388.72

LESSONS LEARNED When budgeting for the proposal to receive the Growing Greener grant, the estimated construction cost for the project a 25% increase to the estimated construction cost needs to be added in case of inflation.