

**Ten Mile Agricultural BMP Project Growing Greener Grant (C990002515)**  
**Washington County Conservation District**

**PROJECT DESCRIPTION:** This grant was to focus on installation in-stream Best Management Practices (BMPs) to reduce streambank erosion and improve aquatic habitat. The project was completed between 2021 and 2024 during multiple phases.

**PROJECT GOALS:** Purpose of this project was to install agricultural best management practices (BMPs) and in-stream BMPs on a farm in Washington County to improve the quality of the unnamed tributary to Tenmile Creek. Water quality would be improved by excluding or limiting animal access to the stream by installing stream bank fencing and animal crossing. The stream bank fencing would allow a vegetative area to be established that would allow the absorption of nutrients and potentially reduce the temperature of the stream. The installation of the culvert and in-stream BMPs would reduce streambank erosion and improve in-stream habitat.

**PROJECT RESULTS:** The site had the following agricultural best management practices installed: 3790 square feet of stabilized walkway/animal trail, 6 stabilized stream crossings, 1 spring development and 10,697 feet of streambank fencing. The site had the following in-stream work conducted: installation of a box culvert, 2851 feet of muddills, 84 feet of toe logs, and 45 log cross vanes. These BMPs resulted in a reduction in sediment, nitrogen, and phosphorus in the headwater stream.

| <b><u>Parameter</u></b> | <b><u>Before</u></b> | <b><u>After</u></b> | <b><u>Load Reduction</u></b> |
|-------------------------|----------------------|---------------------|------------------------------|
| Sediment                | 540,451 lbs/year     | 194,736 lbs/year    | 64%                          |
| Total Nitrogen          | 3,689 lbs/year       | 2,260 lbs/year      | 38.7%                        |
| Total Phosphorus        | 1,119 lbs/year       | 202 lbs/year        | 82%                          |

**PICTURES**



**Before Project**



**After Project**

**PROJECT COSTS:** Total Project Cost \$503,931.00 of which \$421,152.00 was from Growing Greener Grant program and \$82,779.00 was provided as match.

**LESSONS LEARNED:** We encountered two problems with this project. The first problem was sourcing a properly sized culvert for the stream that would meet our timeline to complete the project. This required multiple design changes which lead to a delay in submitting for the chapter 105 permit. To resolve this issue, we were able to submit the permit for the culvert separate from the rest of the project. The second issue was working through the e-permit system for submission of stream restoration portion of the work. We continue to improve the permit submission process to help eliminate questions from DEP and reduce the amount of correction items.

**PARTNERS:** Partners for Fish & Wildlife (California University of Pennsylvania)

**CONTACT INFORMATION**

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