

## **Sugar Run Road Stream Crossing Improvement Project**

**Design Features:** Bottomless Aluminum Box Culvert, stream channel restoration, streambank stabilization, grade breaks, and crosspipes.

**Date of Installation:** September 2025

**Location:** Sugar Run Road, St. Clair Township, Westmoreland County

**Client:** St. Clair Township

**Cost:** \$158,360 from Growing Greener, \$20,000 from Cold Water Heritage Partnership, \$25,754 from Low Volume Road funds were used with an in-kind contribution of \$10,500 from the township. The total cost of the project was \$214,614

**Project Partners:** St. Clair Township, DEP Growing Greener, PA Trout Unlimited, Westmoreland Conservation District, the Center for Dirt and Gravel Road Studies and Mills Excavating.

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### **Project Specifications**

Previously there was an undersized corrugated metal squash pipe with a four foot waterfall at the outlet of the pipe. The waterfall at the outlet impeded aquatic passage up stream of the culvert. Poplar Run is a naturally reproducing trout stream, making fish passage upstream crucial. This squash pipe was replaced with a seventeen foot wide bottomless aluminum box culvert.

Along with the undersized crossing the roadside ditch discharged directly into the stream. This added sediment which has a negative effect to the aquatic organisms living in the stream. Three new crosspipes were also added to disconnect the ditch drainage from the stream.



*Drone image of roadway being excavated for new structure.*

### **Benefits/Performance Measures**

The new structure reconnected the continuity of the stream, allowing aquatic organisms to move freely upstream and downstream. With the natural grade of the stream restored through the structure the erosion from the waterfall at the outlet of the previous pipe is eliminated, reducing the amount of sediment that is entering the stream.

The disconnection of the ditch line flow through the installation of cross pipes has also aided in reducing the amount of sediment entering the stream.

The undersized crossing not only caused a barrier to aquatic organisms but also caused roadway flooding during large rain events. The new larger crossing allows high flows and aquatic organisms to pass freely through the structure.



*(Before): waterfall at the outlet of pipe impeding aquatic organism passage.*



*(After): Stream reconnected allowing aquatic organism passage.*