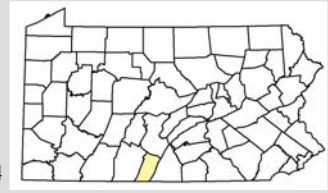


Worksite in Focus

Fulton County Dutch Corner Road

4/13/04



Problem Identification

Dutch Corner Road contributed concentrated, sediment-laden water to Patterson Run, a tributary of Licking Creek. Three primary issues caused this impairment: steep road slopes, deeply entrenched road segments, and significant off right-of-way (ROW) water inputs. Long steep road segments bordered by high banks on either side served to trap stormwater water increasing its volume and velocity thus making it highly erosive. Off ROW inputs from driveways and connecting paved roads contributed more water to already concentrated erosive flows.

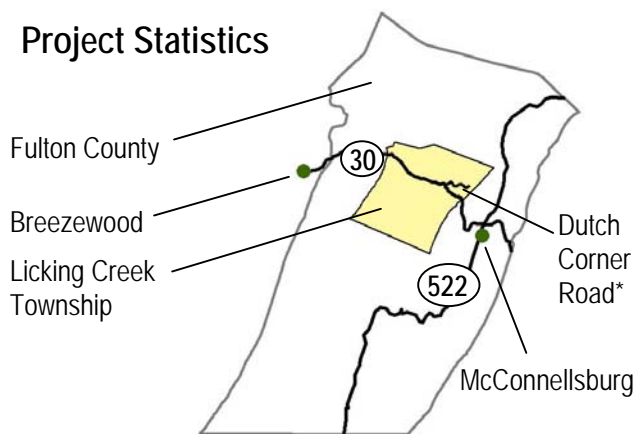
Project Objectives

1. Minimize the entrenchment of the road.
2. Separate off ROW drainage and prevent it from flowing onto the road.
3. Divide and minimize concentrated water flow on steep road segments.

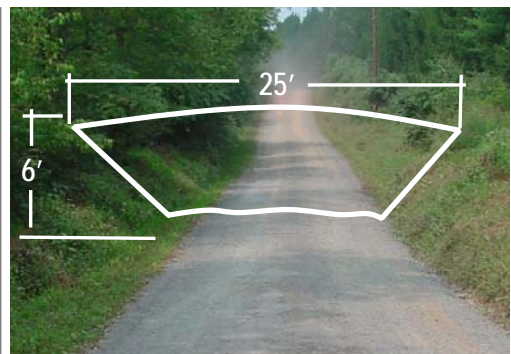
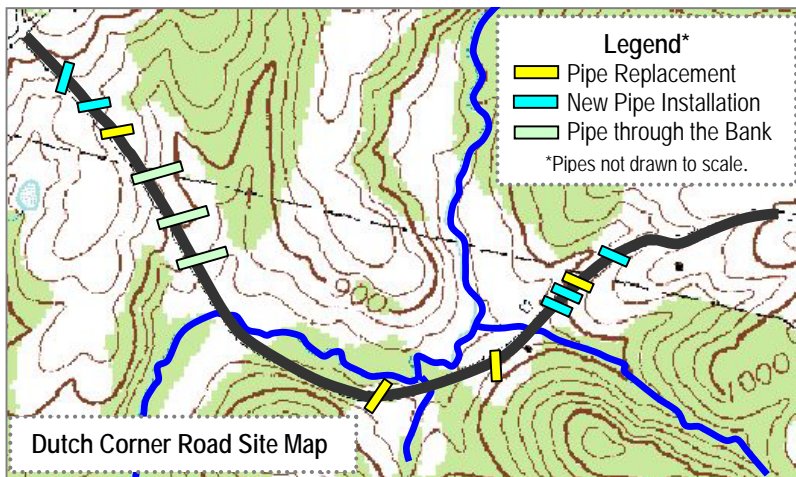
Project Considerations

The deep road entrenchment made raising the road elevation to the height of the surrounding landscape impractical and expensive. The topography lent itself on the steep entrenched road segments to pipe installation through the road banks at a slope of 2% and discharging road drainage on the other side of the bank. Drainage routed in this way is directed into adjacent vegetation where it encounters resistance, can release energy and infiltrate slowly.

Project Statistics



Road:	Dutch Corner Rd
Road Owner:	Licking Creek Township
Length:	4,835 ft
Date Completed:	November 2003



Raising the road elevation to the elevation of the surrounding landscape was impractical because of the amount of material required (above).

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before



after

Before and After Shale Placement. Before, severely entrenched road slopes steeply to stream at the bottom of the hill. After, cross-pipes are added to divide drainage and reduce concentrated flow and the road elevation is raised 2' to cover the new pipes.

Project Solutions

Road profile. Shale was placed on steep entrenched areas to a maximum depth of 2 feet to obtain adequate cover on new crosspipes. Road surface was topped with Driving Surface Aggregate (DSA) for improved performance.

Adding crosspipes and installing pipes through the bank. 3 existing crosspipes were replaced and 9 new drainage pipes were added. 3 of the 9 were installed through the bank. Increased road drainage capacity minimizes concentrated flow before sufficient volume and velocity can build to strong erosive force.

Re-profiling driveways. Driveways were re-shaped at the point where they entered the roadway to eliminate any direct discharge to the road.

Grade breaks and broad-based dips. On steep driveways at points of concentrated flow, grade breaks and broad-based dips were installed to direct drainage off the driveway surface into surrounding vegetation for infiltration.



during



after

Pipes Through the Bank. Note the depth of the trench during construction. After construction the pipe has been covered and stabilized with vegetation.

Cost Summary

Total Project Value:	\$70,962
District Funding:	\$63,712
Materials	\$46,970
Contracted Work & Equipment	\$16,742
In-Kind from twp:	\$7,250
Materials	\$4000
Labor & Equipment	\$3250

For More Information

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www.dirtandgravelroads.org
 Fulton County Conservation District
 (717) 485-3547

* Directions: From U.S. 30: Take Breezy Point Road north 0.4 miles, turn right on Dutch Corner Road. Dutch Corner Road is located 12 miles east of Breezewood, 6 miles west of the intersection of U.S. 522 and U.S. 30 north of McConnellsburg.