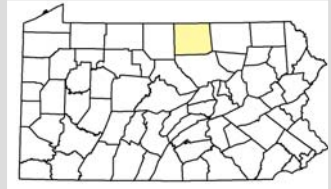


# Worksite in Focus

## Tioga County Fall Brook Road

4/13/05



### Project Background

Fall Brook Road was used as a coalmining operations haul road until the early 1980's. Constructed of coalmine spoil, the road width, in some places, exceeded 60' wide. When coal trucks quit using the road, Ward Township was left with a problem road that could not maintain crown and had constant potholes. The road surface of coalmine spoil was very acidic, very soft and fine, holding and pumping water. Additionally, the coalmine spoil would not support vegetation, so the berms, ditches and banks were barren and a constant source of erosion. The road had inadequate cross pipes, groundwater in the road, and direct sediment discharges into Fall Brook.

### Project Considerations

This segment of road has 2 stream crossings. One of these crossings, inadequate for flood flows, saw high water bypass the existing stream crossing and spill across the road about 300' away.

### Project Facts

Project:	Fall Brook Road
Project Owner:	Ward Township
Affected Watershed:	Fall Brook, Tioga River
Project Length:	1100 ft
Date Completed:	September 2001

### Cost Summary

Total Project Value:	\$24,960
District Funding:	\$21,185
Materials	\$17,070
Equipment	\$3,965
Labor	\$150
In-Kind Contributions:	\$3,775
Labor	\$3,775

### For More Information

The Center for Dirt and Gravel Road Studies  
(814) 865-5355  
[www.dirtandgravelroads.org](http://www.dirtandgravelroads.org)

Tioga County Conservation District  
Ralph Brugger  
(570) 724-1801



Before: Fall Brook Road was so wide, the township could not keep the road crowned. The road surface of coalmine spoil held water and was full of potholes during wet periods and was a constant source of dust in the summer. High flows sent water flooding across the road eroding the surface material directly into Fall Brook. Although already impacted by acid mine drainage, Fall Brook did not need an additional source of impairment.

The publishers of this publication gratefully acknowledge the financial support of the Pennsylvania State Conservation Commission. For additional information or assistance, contact: Center for Dirt & Gravel Roads Studies, Penn State University, 207 Research Unit D, University Park, PA 16802 (Toll-Free Phone: 1-866-668-6683, Fax: 814-863-6787, Email: [dirtandgravel@psu.edu](mailto:dirtandgravel@psu.edu)). Additional copies available on our website at: [www.dirtandgravelroads.org](http://www.dirtandgravelroads.org)



## Project Solutions

**Construct new road base:** To solve the problem of the wide flat road, the township used the existing road surface of coalmine spoil to construct a new crowned road base.

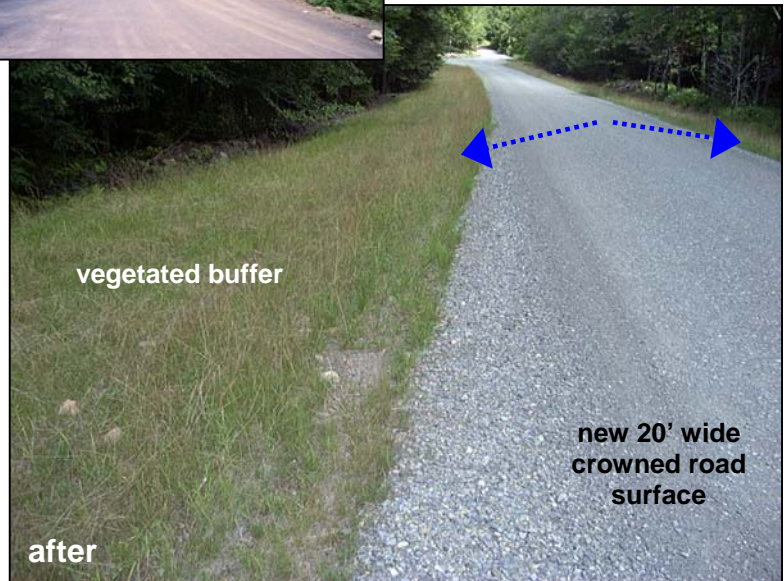
**Re-surface the road:** The centerline of the new roadway was laid out and a 20-foot wide layer of limestone Driving Surface Aggregate (DSA) was placed and compacted. The newly crowned road surface sheds water to either side as sheet flow.

**Vegetate road berms:** With the extra width to work with, the township hauled berm and ditch dirt from other roads in the township and covered the coalmine spoil with 6" of topsoil, forming wide buffer areas (see photo at right). Buffer areas, banks and ditches were limed fertilized and seeded.

**Stabilize stream crossings:** One of the two stream crossings on this project needed to be replaced. A new pipe and head- and endwalls were installed. The township poured its own 2'x2'x4' concrete blocks to construct the headwalls (see photo at right). Additional cross pipes were added to direct ditch water to the vegetated buffer, removing a direct discharge to the stream. At the other crossing, high flows flooded the road 300' away. Where high water crossed the road, the road and road base were armored with R5 rip-rap to allow water to flow over the road without major damage.

## Project Results

Previously, Fall Brook Road required frequent regular maintenance and emergency maintenance following high water flooding. Since project completion in 2001, the township has only had to grade twice. The road itself has a new durable driving surface. Well-vegetated buffer areas reduce dust generation and keep sediment out of Fall Brook.



## Site Map & Directions

From U.S. Route 6, turn left on to State Route 2029 in Mainesburg. State Route 2029 turns into State Route 2022, then into Fall Brook Road. The project begins approximately 3 miles down Fall Brook Road at the intersection of the road with Fall Brook.

