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Project Cost: \$181,669 incl. match

**Contributors:** 

- US Forest Service American Recovery Reinvestment Act
- Lake County Road
  Commission
- CRA River Care Fund

## Partners involved:

Pere Marquette River Restoration Committee including the following partners – US Forest Service, Conservation Resource Alliance, Lake County Road Commission, Wilcox Professional Services, Michigan Department of Natural Resources and Environment, McDowell Construction & Pere Marquette Watershed Council.

# Sanborn Creek & King Road Improvement Project Pere Marquette River Watershed May-October 2011

The Pere Marquette River is a state designated Natural River and Blue Ribbon Trout Stream, and a federally designated Wild and Scenic River. Sanborn Creek is a coldwater tributary to the Baldwin River, a main tributary in the headwaters of the PM Watershed. Sanborn Creek provides spawning and escape cover for trout, and instream habitat for aquatic insects. Sanborn Creek is approximately 13 miles long and this crossing project opens fish passage up to 6 miles of it.

The King road/stream crossing, site #L-82, was comprised of twin 30" diameter culverts that were significantly undersized for the stream. Through this project partners designed and completed the installation of a bottomless arch culvert that accommodates the natural stream channel and allows the natural movement of substrate, fish and wildlife. Paved approaches and spillways channel road runoff away from the stream as well.

Location Cherry Valley Twp. Section 35 Lake County, MI



#### **Best Management Practices:**

- Bottomless arch installation 16'2" span, 5'1"rise, 58.5' long
- Guardrail 425'
- Fieldstone placement
- Pavement (200 lineal feet)
- 2 spillways
- Grading and revegetation

## **Project Benefits:**

- Natural movement of woody debris, substrate, fish & aquatic insects.
- Reduce sedimentation of stream from erosion of steep road approaches and embankments.
- Stream channel returned to a more natural state, unaltered by undersized, perched culverts impounding water & sand upstream.

## King Road and Sanborn Creek Site #L-82 Photos

*Before* Inlet



Outlet





Outlet



Re-paving, 2 spillways and guardrail were included in the construction phase.



#### King Road and Sanborn Creek Site #L-82 Photos

#### Upstream

Before – impounded sediment due to undersized culverts. After – sediment movement uncovered a gravel bottom.



During – installation of the bottomless arch went smoothly with McDowell Construction driving sheet pile for footings and the Lake County Road Commission building the arch on-site.

