Conservation Resource Alliance

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RiverCare™

Sanborn Creek 40th St. Restoration Project
Pere Marquette River Watershed
October 2013 to October 2014

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 cold-water 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 2 miles of it.

The 40th Street road/stream crossing, site #L-65, was comprised of twin culverts (one 3' round & one 2.5' round) 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. In a combined effort with this project nearby site #L-67, a tributary to Sanborn Creek just east of #L-65, was also improved. A corrugated metal pipe arch was installed and surrounding stream banks were stabilized. Paved approaches and spillways were incorporated to channel road runoff away from the stream as well.

Project Cost: $257,500

Contributors:

- U.S Forest Service
- CRA's River Care Program
- Lake County Road Commission
- Great Lakes Fish and Wildlife Restoration Act-U.S Fish & Wildlife Service
- Great Lakes Restoration Initiative
- Michigan Department of Natural Resources-Aquatic Habitat Grant Program
- Pere Marquette Watershed Council
- Upper Baldwin Association/Vogt Foundation

Location:
Cherry Valley Twp.,
Sections 25 & 36,
Lake County, MI
N 43.916107°
W -85.696958°

Partners involved:
Conservation Resource Alliance, Lake County Road Commission, Michigan Department of Environmental Quality, Michigan Department of Natural Resources, U.S Fish & Wildlife Service, U.S Forest Service, Prein & Newhof Engineering, Pere Marquette Watershed Council, Contech Engineering Solutions, McDowell Construction, Kanouse Outdoor Restoration

Best Management Practices:

- Bottomless arch installed over Sanborn Creek & corrugated metal arch culvert installed over tributary
- Re-align culvert to provide better alignment with stream
- Fieldstone placement for slope stabilization (50 cu. yd.)
- Grading & re-vegetation
- Pavement, curbing, & 6 spillways constructed
- Re-route 200' of stream away from road & secure whole tree revetments on both sides of stream entire length

Project Benefits:

- Restore natural movement of woody debris and sediment upstream & downstream
- Halt up to 4 tons of sediment into stream from roadbed
- Reduced flooding potential & annual road maintenance
- Reconnect over 2 upstream miles of Sanborn Creek for migratory fish & other aquatic insects
- Ensure safe roadway for vehicle traffic

Site #L-65 Before – undersized culverts and road runoff during rain events and snow melt were problematic

Site #L-65 Before – culverts were awkwardly skewed and runoff drained directly into Sanborn Creek

Site #L-65 After – a 16’ wide bottomless arch effectively spans Sanborn Creek & allows for a natural stream bottom

Site #L-65 After – paved approaches, curbing and spillways route runoff into nearby upland areas

Site #L-67 Before – 2’ dia. culvert caused pool formation at the inlet &impounded sediment on this Sanborn tributary

Site #L-67 Before – at the outlet the stream then flowed alongside the road for several hundred feet

Site #L-67 Before – the stream flowed alongside the road collecting road runoff & sediment from the shoulders

Site #L-67 Before – Road grading contributed excessive sediment to this stream

Site #L-67 After – Paved approaches and spillways divert runoff away from the stream & stop erosion of the roadbed

Site #L-67 After – The Sanborn tributary now flows through a 6’ diameter, 60’ long poly-coated CMP

Site #L-67 After – Fieldstone was placed at the culvert and woody debris was placed along the stream downstream