



## Conservation Resource Alliance

Telephone: 231-946-6817

[www.rivercare.org](http://www.rivercare.org)

Email: [info@rivercare.org](mailto:info@rivercare.org)



**Project Cost: \$377,499\***

\*In-kind match was an additional \$49,644

### Contributors:

- Great Lakes Fishery Trust
- Grand Traverse Band of Ottawa & Chippewa Indians
- National Oceanic Atmospheric Administration
- Environmental Protection Agency
- FishAmerica Foundation
- US Fish & Wildlife Service
- Benzie County Road Commission
- Trout Unlimited - Adams Chapter, Pine River Area Chapter & Martuch Chapter
- USDA - Conservation Innovation Grant with Little Traverse Bay Bands
- CRA's River Care Program

### Location

Section 19 WeldonTwp.  
 Benzie County, MI  
 N44.5518 degrees  
 W85.0541 degrees



## Dair Creek Recovery Project - Betsie River Watershed

June 2006 through October 2008

The Betsie River is a State designated Natural River popular for salmon & steelhead fishing in Northwest Michigan. Dair Creek is the coldest & second largest tributary to the Betsie - thus provides critical escape & spawning habitat in a watershed that is known to have extreme water temperatures on the mainstem during summer & winter months. Dair Creek is a Designated Trout Stream & supports populations of brook & brown trout. The problem with Dair Creek was that in 1865 a dam, pond & sawmill were constructed near its confluence with the Betsie mainstem, & part of Dair Creek was re-routed to a man-made channel. Since 1865, the original dam collapsed & burned, & the concrete dam built in its place also failed. Outdated road crossings upstream & downstream of the dam were unable to handle stream flows & had major erosion problems. By removing the dam remnants, putting Dair Creek back into its original stream channel, and improving 3 nearby road crossings we now have fully opened fish passage to approximately 8 miles of prime stream habitat on Dair Creek and stopped approximately 75 tons of sediment from annually washing into the streams!

### Best Management Practices:

- Barrier removals
- Culvert replacements
- Stream re-route & channel establishment
- Fieldstone placement
- Grading and revegetation
- Sediment removal
- Pavement, curbing & diversion outlets
- Road embankment stabilization
- Fish habitat platform structures

### Project Benefits:

- Fish passage
- Natural movement of woody debris, substrate, aquatic insects
- Reduce scouring of streambed.
- Provide natural stream bottom under roadways
- Connected ecology of 8 miles of Dair Creek to the Betsie River
- Reduce sedimentation of the mainstem & Dair Creek from road runoff & embankment erosion

### Partners involved:

Betsie River Watershed Restoration Committee including the following partners - Conservation Resource Alliance, Michigan Department of Environmental Quality, Michigan Department of Natural Resources - Fisheries Division, Benzie County Road Commission, Grand Traverse Band of Ottawa & Chippewa Indians., Wilcox Professional Services, USFWS, Natural Resources Conservation Service & landowner, Bryan Matthews.



### Dair Creek Photo Layout

Before - Concrete remnants, boards and blocks directed Dair Creek into the actively eroding man-made channel. This caused scouring of the streambed & blocked fish passage.



After - All debris was removed & the stream channel was redirected to the natural streambed.



Before - Undersized culvert on the dry streambed. After- New culvert & stream back in channel.

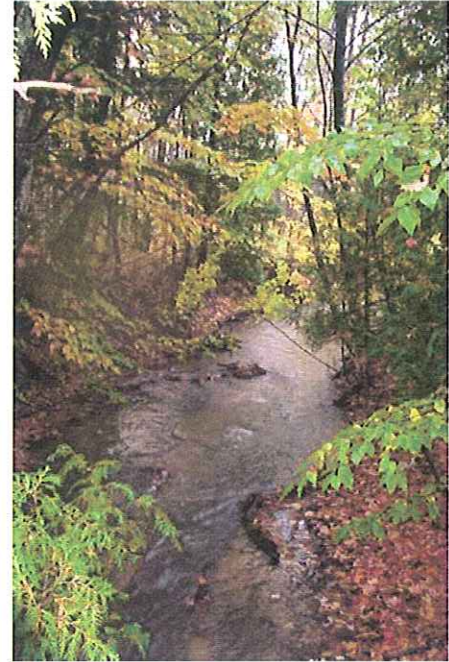




Before - Natural streambed was dry.



After - Dair Creek returned to channel.



Before - Perched triple culverts *upstream* of dam.



After - Bottomless arch allows fish passage.



◀ Before & After - Old King Road runs along the Betsie mainstem & served as an access to the former sawmill on Dair Creek. The road was continuously washing into the stream. Sheet piling, fieldstone and pavement now control runoff and stabilize the sensitive embankment.