

## Emergency Watershed Protection Program

### **An EWP Success Story**

On May 15, 2003, the Western Upper Peninsula of Michigan experienced extensive flooding when spring storms dropped up to five inches of rain on saturated soils.

In rural Marquette County, an earthen dam on the Silver Lake Basin failed resulting in flooding of homes and businesses along the Dead River basin and in the city of Marquette.

Downstream dams were threatened resulting in evacuation of portions of Marquette, including the Natural Resources Conservation Service (NRCS) Field Office.

A state of emergency was declared for Marquette County by Governor Granholm on May 16, 2003. Total damage was estimated to exceed \$10,000,000.

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## Silver Lake Basin Marquette County, Michigan

A second dam failed at Tourist Park in the city of Marquette. A power plant that provides services to rural Marquette County and two mines was closed for more than 30 days due to flooding and siltation of the water intake. Several county roads and bridges were washed out.



Silver Lake Basin emptied after the dam failure.



Downstream of the Silver Lake Basin, the Dead River Basin spillway overflowed during the flood.



Flooded residence in the Dead River Watershed



Road washout after the flood.

NRCS staff was involved in the disaster effort from the beginning. Local community leaders were advised of potential recovery assistance through the Emergency Watershed Protection (EWP) Program. NRCS field staff assisted the local emergency response personnel with the damage assessments to the county infrastructure, businesses and private homes.



Debris removal at Tourist Park substation.



Silver Lake Basin Repair



Before EWP recovery assistance:  
Severe streambank erosion downstream of the basin. (May 2003)



After EWP recovery assistance:  
Streambanks have been sloped and seeded. (July 2003)

Local units of government requested recovery assistance under the EWP program. Nine sites, out of approximately 60 sites that were assessed, were deemed urgent and compelling in nature.

The restoration work involved stabilizing critically eroded areas so that project sponsors could repair washed out access roads to the hydroelectric power substations. Eroded areas were backfilled and seeded. Sediment was removed to alleviate the threat of additional damage to the power plant turbines.



Before EWP recovery assistance:  
Tourist Park streambank erosion. (May 2003)



After EWP recovery assistance:  
Tourist Park stream banks were reshaped, seeded, and stabilized with rock rip-rap. (July 2003)

Debris was removed to reduce the risk of additional flooding of homes and businesses. Stream bank revetment measures were also installed to protect roads and public utilities.

Approximately \$660,000 of EWP financial assistance was used to address these urgent and compelling needs.



During EWP recovery assistance:  
Aerial seeding of Silver Lake Basin to prevent erosion. (June 2003)



After EWP recovery assistance:  
One month after seeding of the basin. (July 2003)

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