

## Wolf Creek I, II, III Project

### **DESCRIPTION:**

A two mile stretch of Wolf Creek, an urban stream in the community of Greenville, was reconstructed using geomorphic techniques to slow stream bank and bed erosion. Meanders were reconstructed and lined with natural material, and vegetation was planted to stabilize the eroding stream banks. Twenty-nine acres of floodplain were reconstructed to give the stream more capacity to carry flood waters away from urban home owners. Over 71 property owners cooperated with Plumas Corporation and the Greenville Community Services District on planning, design and construction.

### **SPONSORS:**

FEDERAL: U.S. Forest Service, Natural Resources Conservation Service; STATE: California Department of Water Resources, California Department of Fish and Game, California State Water Resources Control Board, California Department of Forestry & Fire Protec

### **PROJECT RESULTS:**

Greenville High School students have been collecting data to monitor the project since 1990. Stream shape and characteristics were substantially changed by construction of the project. Small improvements in stream cover and fish habitat were measured. However, the presence of insects and macro-invertebrates continued to be low. Vegetation cover decreased because of project construction. Survival of planted vegetation was 70%. Changes in the channel structure constructed during the project occurred after the floods of the winter of 1994-1995. In March 1995, Wolf Creek swelled to a volume of 4,400 cubic feet per second, over eight times its normal flow (Meadowbrook 1995). These flood waters carried an estimated 112,000 tons of sediment through the project area. CRM members estimate that about 6,400 tons of this soil (6%) came from stream banks that eroded in the project's Phase III area, leading to a small net increase in the width and depth of the stream channel. Rock weirs installed in Phases II and III, the straightest section of the Creek, performed as expected, while channel reconstruction measures in Phase I, the meandering section of the project, were lost. Although the creek's banks did not enlarge in this section, the stream was moved out of the carefully constructed channel into newly formed channels (Meadowbrook 1995). Most of the new meanders and armored stream banks were bypassed. Despite loss of these meanders and the severity of the flood, the majority of the stream banks treated during the project showed little erosion and little private property was lost.

### **PROJECT REPORTS (IF AVAILABLE):**

Wolf Creek I-II-III Fact Sheet

[http://www.weebly.com/uploads/4/0/5/5/40554561/wolfcrki\\_ii\\_iii\\_factsheet5.pdf](http://www.weebly.com/uploads/4/0/5/5/40554561/wolfcrki_ii_iii_factsheet5.pdf)