WATERSHED
ALAMOSA RIVER WATERSHED RESTORATION PROJECT

Conducted by: Alamosa – La Jara Water Conservancy District and the Alamosa Watershed Restoration Foundation
On the Web:
Contact: Ben Rizzi
Project Partners: Colorado Water Conservation Board, Ducks Unlimited, National Resources Conservation Service.
Contract Period: 2001-2006
NPS Funding: $233,568
Matching Funds: $537,500

This NPS project focused on riverbank stabilization and riparian habitat improvements along a 2.5 mile reach of the Alamosa River in Conejos County, Colorado.

The 127,000 acre Alamosa River Watershed is located in south-central Colorado. The river is approximately 72 miles long, beginning at the Continental Divide in the San Juan Mountains and ending in wetlands adjoining the Rio Grande. Approximately 50,000 acres of the San Luis Valley are irrigated from the Alamosa River to raise alfalfa, small grains, pastures, and potatoes. Cattle and sheep are also raised in the area. Conejos County is considered the second poorest county in Colorado, with 45.4 percent of the population living below the national poverty level. The town and land ownership, within the project area, was established during the mid and late 1800s by Spanish and New Mexican settlers.

The river below Terrace Reservoir is highly unstable and suffers from severe erosion of the stream banks. This condition is the result of a major channel straightening project conducted in the early 1970s.

Many irrigation diversion projects, individual attempts to protect streambanks, and overgrazing of streambank and riparian vegetation compound the problem.

Before treatment. 2002

The channel is down-cutting in areas and is over-widened and braided in others, causing high bedload deposition that adds to the overall instability. The lack of perennial flow in the stream, during most of the year, inhibits the vegetation growth on the stream banks between the Gunbarrel and County Road 8. All these issues contribute to the high erosion rates and to the bedload entering the river system. The estimated amount of material that was being generated in the 2.5 mile project area prior to construction totaled 3212 cu yards per year, or 4,176 tons per year.

The goals of this project was to apply Best Management Practices (BMP's) to restore the health of the riparian zone, and to restore the balance of sediment transport continuity through re-establishment of a geomorphically stable stream.

After treatment and 2 runoff seasons (2006)

This involved physically constructing the correct dimensions or width to depth ratios in the channel, reestablishing the meanders, creating the riffle/ pool sequence that occurs in a natural stable condition, and reconnecting the stream to the old flood plain.

Rock vanes were built in the outside bends to direct the stream flows back into the center of the stream, relieving the sheer stress on the riverbanks.

Rock cross vanes were placed in the bottom of the stream for grade control. This is to prevent further down-cutting of the channel bottom.