



# FEMA

## Successful Rebuilding After Previous Ruidoso Flood Proves it Can be Done

**Ruidoso, NM** - On Highway 70, as the New Mexico desert landscape ascends into mountains, a yellow road sign warns northbound travelers that the area may close due to flooding. In 2006, the continuous summer rains caused that to happen. The storms created overland flooding throughout Lincoln County, New Mexico. On September 18th at the base of the Gavilan Canyon in the Village of Ruidoso, rapid waters from the Rio Ruidoso washed out a bridge crossing.

The Gavilan Canyon Road, a two-lane bridge built in the early 1980s, serves as a major bypass connecting permanent and secondary residences to the village. Ruidoso has 9,500 permanent residences and thousands of seasonal residents who stay in condos, hotels, campsites, family cabins, large resort homes, and mobile homes. During peak weekends, the population may increase to 30,000.

The Gavilan Canyon Road bridge consists of nine side-by-side, 30-inch round culverts packed with gravel, covered by a concrete decking, and paved with asphalt. In incidents prior to the 2006 floods, water topped over the bridge but did not wash out as it did in the 2006 flooding event.

After the floodwaters subsided, village officials inspecting the bridge crossing discovered heavy debris clogging. A video camera extended into the 30-foot length of each corrugated metal culvert revealed the reasons. "What the camera showed was rusted metal with giant cavities around five of the culverts. The only thing holding the bridge [together] was the concrete on top of it," said J.R. Baumann, Street Director for the Village of Ruidoso. The Gavilan Canyon bridge was considered extensively damaged.

In response, the Village of Ruidoso selected significantly larger prefabricated, concrete-box culverts to improve the bridge. The new culverts double the capacity to 500 cubic feet per second.

"Foresight on the part of the governing body of the Village of Ruidoso saw this as a mitigation opportunity. Village leaders agreed to provide additional funding to improve the size of the bridge culverts to accommodate additional flow during flooding events," said Ken Davis, Federal Emergency Management Agency (FEMA) Public Assistance Officer. The Village of Ruidoso's action would mitigate the crossing against future flooding damage. As an interim solution the existing culverts were cleaned out, which allowed the bridge to be used for the remainder of 2006 and 2007.

In March 2008, the crossing was closed to traffic and the damaged culverts removed. Three new culverts with a 3-foot by 5-foot capacity were installed. The river banks were widened and covered with gravel and the upstream side "straightened" and expanded to allow better flow. A new pedestrian walkway was added to the bridge with exterior handrails installed. However, custom guardrails for the interior that were ordered had not arrived in time for the Memorial Day weekend opening.



Lincoln County,  
New Mexico



### Quick Facts

- Sector:  
**Public/Private Partnership**
- Cost:  
**Amount Not Available**
- Primary Activity/Project:  
**Flood Control**
- Primary Funding:  
**Local Sources**