

# CONSERVATION Showcase

## Dam Rehab Achieves Goals

*Another 100 Years Expected*

The Piedra Liza Dam was originally built in the late 1950s to protect both agricultural land and urban areas after a devastating flood in 1949 destroyed a 100-year-old convent in Bernalillo, New Mexico just north of Albuquerque.

Since the dam was constructed, Sandoval County has increased almost seven-fold in population. As a result, the project area, which contains readily developable land located immediately adjacent to Interstate-25 and the rapidly growing Placitas area upstream of the dam, has also experienced dramatic growth.

It is currently estimated that more than 1,700 people live within the floodplain downstream of the dam and would have been adversely affected by removal or failure of the dam. The dam also protects motorists on Interstate-25, which carries in excess of 43,000 vehicles per day.

Over the years the dam has been well maintained by the local sponsors, the Coronado Soil & Water Conservation District and Town of Bernalillo. But analysis based upon current design standards indicated a number of weaknesses in the structure. Deficiencies in the existing dam included outdated components on the principal spillway, and an undersized, potentially erosion-prone, earthen auxiliary spillway.

The outlet structure was a 24-inch pipe that passed through the dam to safely release waters that built up behind the earthen structure in the event of a flood. While it was adequate, the outlet site on the downstream side of the dam suffered erosion problems and needed repair. Because the auxiliary spillway could erode, a major component of the rehabilitation project was to reshape the auxiliary spillway and armor it with roller-compacted concrete so it could safely pass flood waters.



In 2005, the sponsors applied for assistance from NRCS to rehabilitate their dam. To help with their cost share requirements, the sponsors included Sandoval County as a co-sponsor for the project and secured funding support through the New Mexico Office of the State Engineer, Dam Safety Bureau.

Construction of the rehabilitation project for the Piedra Liza took place in the spring and summer of 2007. The project corrected all of the deficiencies of the existing structure, and helps assure the dam will continue to provide flood protection for downstream users for another 100 years.

The Piedra Liza project is an excellent example of how an existing structure can be brought up to modern-day standards through partnerships with local, state and federal governments, to protect New Mexicans and their natural resources from floods the state's renown cloudbursts can cause.



For questions about the NRCS watershed dam rehabilitation program, its dam assessments, and cost-sharing options, contact NRCS's state conservation engineer at (505)761-4489.

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