

Water Review

A Perspective On Western Water Issues Prepared By The Family Farm Alliance And Its Members

COLORADO

The Mancos Project

Water Users Move to Rehabilitate Crumbling Delivery System

BACKGROUND

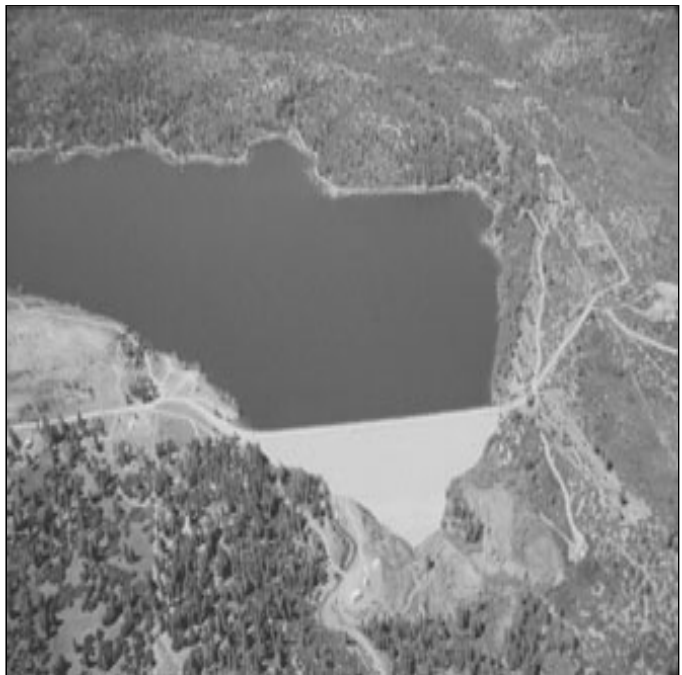
The Mancos Project in the southwest corner of Colorado consists of the Jackson Gulch Dam and Reservoir, the Inlet Canal, and the Outlet Canal. The greater part of the distribution system was constructed by local interests prior to 1900. Facilities constructed by the U.S. Bureau of Reclamation furnish supplemental water to 13,746 acres of agricultural lands, and provide a domestic water supply for Mesa Verde National Park, Mancos Rural Water Company and the town of Mancos. The 55-year old Mancos Project has retained most of its structural integrity and functionality. However – as noted in an alarming number of other aging water facilities in the West – significant potentially catastrophic problems have been identified that threaten the future working life of this important project.

PROJECT DESCRIPTION

Settlement and irrigation of the Mancos Valley began about 1876. The natural flow of the Mancos River during summer and early fall months was very low, and inadequate for irrigation. By 1893, when a state adjudication of water was completed, late summer demands for irrigation water far exceeded available supplies. To alleviate the shortage, three small reservoirs storing approximately 1,500 acre-feet of water were built by local irrigators.

In 1937, U.S. Bureau of Reclamation (Reclamation) investigations led to the conclusion that the Jackson Gulch Reservoir site, an offstream storage basin, was the only site of sufficient size to furnish an adequate project water supply. The project was ultimately approved by President Roosevelt on October 21, 1940 under the Water Conservation and Utilization Program Act. Construction began in July 1941 and – due to delays associated with World War II – was not completed until May 18, 1950.

Jackson Gulch Dam is a rock-faced earthfill structure 180 feet high with a concrete cutoff wall. The reservoir is located off-stream on Jackson Gulch, five miles north of Mancos, and has a total capacity approaching 10,000 acre-feet. The dam does not have a spillway. The outlet works consists of piped pressure conduit.



U.S. BUREAU OF RECLAMATION

Jackson Gulch Dam and Reservoir

The offstream reservoir is fed by the 2.6-mile-long Inlet Canal from the West Mancos River. Water from the reservoir is returned to the original streambed at a point higher than the project lands through the 2.2.-mile-long Outlet Canal.

The Mancos Water Conservancy District assumed operation and maintenance responsibility for the project in 1963.

(Continued on Page 4)

Mancos Project Has Big Rehabilitation Needs

(Continued from front page)

SIGNIFICANCE

“The Mancos Project is a vital cornerstone underpinning the economy and well being of an entire community and region, home to world famous national historic resources,” says Gary Kennedy, Superintendent of the Mancos Water Conservancy District (District).

The project provides a dependable supplemental water supply for locally grown crops such as alfalfa, grass hay, irrigated pasture, wheat, oats, barley and corn silage. Mesa Verde National Park – which has averaged nearly 600,000 annual visitors in the last 11 years – the community of Mancos and the Mancos Rural Water Company have subscribed for reservoir storage to ensure a permanent source of domestic water for future growth of the Mancos Valley. Jackson Gulch Reservoir is stocked with trout, and there are many good camping and picnicking sites, as well as opportunities to hunt deer and elk.

ISSUES

Aging and gradual deterioration of the canal system, increasing maintenance costs, and a history of delivery interruptions caused by landslides and rock fall incidents have seriously jeopardized the life expectancy and reliability of the entire canal system. Water diversion from river to canal begins as soon as the snowpack begins to melt in the spring. During this time, six weeks of high flows fill the reservoir, and the canal is the most vulnerable. One major threat at this time is the high flow itself, since the canal is running the maximum amount of water it can carry. The canal is also susceptible to rock damage and landslide action due to spring thaw, rain and saturated soil.

A geotechnical report prepared in 2004 identified significant problems in the form of concrete aging and deterioration, structural distress, hydraulic constrictions, access

limitations, and risks from geologic hazards for the entire 4.9-mile length of canal. Present operations facilities, such as a workshop, the dam tender’s residence, and the public office are also deteriorating. Due to the nature of their construction, purpose and age (63 years), rehabilitation and/or modernization of these buildings is cost-prohibitive.

Evaluations show that aging and deterioration are jeopardizing the future reliability of the project. Buckhorn Geologic, Inc. has determined that rehabilitation is one-third less costly than replacement. Continuing emergency management places a greater financial burden on the local economy and threatens the Project, says Kennedy.

“The District Board of Directors is taking a proactive stance to restore and rehabilitate the operations facilities, securing it for future generations,” said Kennedy. “Loss of any of the Project’s operations facilities is not an option.”

SOLUTIONS

Recognizing the burden of their responsibility, the District entered into a contract with Buckhorn Geotech, Inc. in September 2003 to conduct a thorough engineering assessment of Jackson Gulch canal system and operations facilities. The District is asking for federal appropriations in the amount of \$6.2 million for the rehabilitation of the Project operations facilities, and has also submitted a grant

request to the Environmental Protection Agency. The District has already received grants from the Water 2025 initiative to test linings for the concrete flumes, and from the Bureau of Reclamation to install a measuring device.

Last year, District water customers voted to increase property taxes to support rehabilitation efforts and to maintain water supply while making necessary repairs.

By the end of this year, the District will have spent over \$470,000 on actions since 2004 intended to mitigate rock falls, improve slope stability, and restore concrete. The anticipated costs over the next three years are significantly higher, which is why the District is pushing its appropriations request for the third time.

“Unfortunately, a project of this magnitude is beyond the financial capability of the population of the District,” said Kennedy. “This, however, is also a federal project – title is held by the federal government. We will continue to do all we can to prevent a catastrophic canal failure, but we need those federal appropriations.”

Sources: U.S. Bureau of Reclamation Upper Colorado Regional Office, Reclamation Western Colorado Area Office, Mancos Water Conservancy District.

For more information, please contact Gary Kennedy, Superintendent of Mancos Water Conservancy District by calling (970) 533-7325, or e-mailing, gary_mwcd@velocitynetdsl.com.

FAMILY FARM ALLIANCE

P.O. Box 216
Klamath Falls, Oregon 97601

