

NICHOLS RESERVOIR DAM PRESSURE PIPE REHABILITATION



Insituform embarked on a project for Colorado Springs Utilities in late 2017 to rehabilitate 300 feet of 16-inch steel pipeline running along Nichols Reservoir near Pike's Peak.

The client was in the process of redesigning and adding to an existing structure at the dam, but the existing pipe would need rehabilitation as well, since the new construction would make future access difficult. In addition, the steel line had two 45-degree bends and required a pressure rating of 25psi. This called for a unique pressure solution.

Project Challenges

The Nichols Reservoir pressure pipe rehabilitation project was unique not only because of access issues due to its location at Pike National Forest, but also due to its 8700-foot elevation. Additionally, most dam applications do not require pressure capabilities.

The Solution

The client, along with AECOM, chose Insituform's fibre-reinforced InsituMain® cured-in-place pipe (CIPP) system for the project. The InsituMain® CIPP system provided a solution that could not only handle the pressure rating but could also meet the project's need for a small jobsite footprint and accessibility.

The material was comprised of traditional felt with added glass to ensure that the CIPP could handle the required load both internally and externally.

Installation & Result

The installation was broken up into two shots, where other technologies would have required three shots. This hard-bid project was evaluated on specific contractor qualifications. Insituform's general contractor partner was SEMA, which self-performed all the other work and supplied pits and support for the CIPP installation.

After installation, the rehabilitated pipe was pressure tested to 40psi and put back into service.