

**McClave Water Association
Water Delivery Improvement Project
Final Report**

Prepared For:
WRSA Grant – Arkansas River Basin
WRSA Grant – Statewide Account
Attn: Ben Wade and Dori Vigil
Colorado Water Conservation Board

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Project Summary & Background

The sole mission of the McClave Water Association, Inc. is to efficiently provide reliable, clean and safe drinking water to the unincorporated town of McClave and the surrounding area. The Association services roughly 175 residential and commercial metered taps, including several for the McClave School District. Much of the system was constructed in the 1960's using 40-year grant/loan packages from Rural Development, and has undergone limited improvements since that time due to lack of financing. Because of the high poverty rate in the area (Bent County ranked as the county with the 4th highest poverty level in Colorado by the U.S. Census Bureau), rate increases are not a viable way for the Association to raise funds to replace its aging infrastructure.

The McClave Water Association Delivery Improvement Project was intended to replace two sections of PVC distribution line (totaling roughly 1.5 miles in length) that had been identified as the location of heavy water losses and frequent repairs due to the deterioration of the PVC pipe. The Board of Directors deemed these two sections of distribution line as the top priority for replacement due to the high amount of leakage loss and repair costs. Although the replacement lines have been in place a short amount of time, losses accounted for by leaks associated within these two distribution sections have shown a significant decrease since the installation of the new distribution lines. Additionally, the water pressure to the taps served by these distribution lines has increased exponentially following the installation.

Project Approach & Implementation

Following project approval in early May 2016, the initial phase of the project was the preparation of the site for line replacement on County Road LL, beginning at the intersection with County Road 28, and continuing west roughly 4,500 feet. The county right-of-way where the current line was located, and the new line was to be installed, was heavily covered by weeds and other vegetative debris that needed to be cleared prior to performing utility locates noting the locations of existing utilities. Once this task (Task 1) was completed by the staff of the McClave Water Association as part of the in-kind contribution to the project, DeWitt Excavating was contracted to initiate the first section of Task 2, the replacement of the first section of the new distribution line. Once material and equipment mobilization to the site was complete, the trenching and installation of this new 3-inch line, schedule-40 gasketed PVC line, including tracer wire, four service tie-ins and one valve, for this phase of the project was finalized on May 24, 2016 under the supervision of McClave Water Association Certified Water Operator and Distributor, Jacob Vanture, to ensure satisfactory function and workmanship. The total cost for this phase of the project was \$25,581.07, of which \$13,850 was the cost of installation and labor, and \$11,485 was material and supplies, with the remaining \$246.07 tax expense. Check #8001293293, in the amount of \$25,335 and dated July 14, 2016, was received for the payment of this invoice.

Following the completion of the first section of distribution line replacement, bids were requested and received for the installation of the second section of line replacement in the north Bent County right-of-way on County Road JJ, starting at County Road 32 and continuing west approximately 3,000 feet. The trenching and installation of this section of 2-inch of high-density polyethylene (HDPE) line, including tracer wire, two service tie-ins, one flush hydrant and one valve, was completed by Habitat Construction, LLC on October 26, 2016. The four-day installation was once again completed under the supervision of McClave Water Association Certified Water Operator and Distributor, Jacob Vanture, to ensure satisfactory workmanship and function. The total cost for this phase of the project was \$23,728.52, bringing the total for the project to \$49,309.59, roughly \$5,500 under the total budget of \$54,810 for the project.

Conclusion

The McClave Water Association Delivery Improvement Project can be described as a success for the McClave Water Association and its mission to efficiently deliver reliable, clean and safe water to its members. Project implementation resulted in a major improvement in the distribution system and results from these improvements will continue to be realized over the long term in increased water savings, which fulfills the goals and objectives identified in the Arkansas Basin Implementation Plan, specifically the municipal goal to “Support regional infrastructure development for cost-effective solutions to local water supply gaps.” (Section 1, page 15)

The McClave Water Association would like to thank the Colorado Water Conservation Board for its support of the project. If the McClave Water Association can provide any further documentation for support, please feel free to contact us. Thank you.

Appendix

The following are maps and pictures detailing the implementation and construction phase of the project.

McClave Water Association Water Delivery Improvement Project Road LL Line Replacement

▲ = Tie-in to meter or distribution line

⊗ = valve

New 3" gasketed PVC water line w/tracer wire

Bent County Road LL

Bent County Road 28

McClave Water Association Water Delivery Improvement Project Road JJ Line Replacement

▲ = Tie-in to meter or distribution line

◆ = Flush hydrant

New 2" HDPE water line w/tracer wire

Bent County Road JJ

Bent County Road 32



Line Installation – County Road LL



Line Installation – County Road LL



Line Installation – County Road LL



Line Installation – County Road LL



Service Tie-In – County Road JJ