

# Problem PVC Replaced in Dickinson RWD 1

**R**ural Water District No. 1, Dickinson County, was originally constructed and placed into service in 1972. At the time, the materials used in rural water districts included solvent weld (glued) PVC pipe. The rubber-gasketed PVC pipeline became popular in the mid-70s, however, the solvent weld was the only affordable product available prior to then.

Dickinson RWD 1 is located in north-central Dickinson County north of Abilene; it serves 365 customers in an area encompassing approximately 290 square miles. The district is operated from an office in Talmage. Operator/Manager Adrienne Feeney has been working for the district since August 2010. Adrienne acquired a Class I water operator certification in December 2011 and assumed both the operator role as well as bookkeeping for the district. Adrienne received the Rural Water Office Manager of the year award from Kansas Rural Water Association in 2015.

Dickinson RWD 1 had experienced extremely high water loss for many years prior to Feeney's employment. Prior to her involvement, the district had replaced sections of pipeline that experienced repetitive leaks because of faulty solvent weld joints. KRWA staff worked with prior employees at the district to help locate leakage. Those efforts were successful but no sooner than would one repair be made that other leaks would develop. The district had many miles of 1.5-inch and 2-inch solvent welded pipe. The district replaced two areas that had an excessive number of



**The contractor on the project, McInroy Contractors, LLC of Nevada, Missouri, is required to install the new pipeline no more than fifteen feet from the original pipeline so that the district maintains compliance with the existing right-of-way agreements.**

leaks on this pipe size. While the water loss was reduced in those areas, more needed to be done. After extensive review and debate, the district decided to embark on a pipeline replacement project.

Initially the district board of directors had decided that the project would be rather small, again replacing another problematic area where the district was regularly experiencing pipeline breakage. With Feeney's encouragement the district's board decided to replace all the remaining portions of the district that had pipe of the similar age and construction method. The district's work with consultant, Stuart Porter, Schwab Eaton, Manhattan, Kansas, spanned a four-year period with many changes and additions. The project finally broke ground on May 4, 2020.

## The project . . .

The project consists of replacement of approximately 85 miles or 400,000 linear feet of pipe that ranges in size from two to six-inch. It involves 74 new gate valves, 18 flush hydrants and 246 service re-connections. The district will also be making improvements to all three water storage tanks that serve the district. Upgrades to one chlorination

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