

# New landmark on Marion County horizon

**R**ural Water District No. 1 that serves northwestern Marion County has been in service since 1973. The district, which primarily serves "rural" residents, several feedlots and dairies and the communities of Tampa and Ramona, has been able to get by with its single 10 x 90-foot tall standpipe just west of Highway 15, west of Tampa. Even though the district had a need for more storage — an elevated tank was identified in 1991 as a way to solve the problem — the district had bigger problems. At that time the district had 220 meters. One of the district's wells was pumping water that contained extremely high iron-manganese content water which contributed to a buildup of minerals inside the PVC pipeline. Water demand often exceeded pumping capacity during peak usage. Schwab-Eaton, P.A., a Manhattan, Kansas consulting firm, analyzed the system and came up with a long-range plan to address the problems. David Mueller, member of the district's board of directors (and also KRWA director) recalls the steps proposed by the consulting firm.

An interesting situation arose during the financing of the improvements. The district's loan had been sold to GMAC under the national Discount Purchase Program. The district contacted GMAC for approval to finance the improvements. David Shupe, on behalf of the Kansas Rural Water Finance Authority, was assisting the district in the process. When the reasoning for the project was explained to the financing company, they denied the request, responding that the

project was "not appropriate" and then suggested that "the district should move the wells closer to the tower instead of

to increase flow. Thanks to the 'thrifty' help of Schwab-Eaton, the projects were very reasonable in cost. Having

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laying a larger transmission line!" The district's response was to issue bonds through KRWFA and pay off the existing loan. Working with a lender who understands your needs and business is just as critical an issue as the interest rate.

"The first step was getting water from the pumps to the tower," Mueller says. "Mike Butler had a great article in the July, 1991 *The Lifeline* about that process. A coating of iron/manganese was "slowing" the flow of water. KRWA techs Bill Goheen, Doyle Reissig and Doug Guenther helped pig the transmission line. The results were astounding. Cleaning of 12.5 miles of line yielded a 35% increase in production and a 24% reduction in pressure.

"In 1992, the district drilled two new wells and replaced the culprit well that was producing the excessive iron/manganese. Later that year, the district installed a parallel transmission line from the pumps to the tower

Peterson Irrigation in the area and familiarity with a pipeline contractor also helped. The district is in the process of



*The new Marion tower takes shape with the original standpipe in the foreground.*

drilling a new well to replace one that has been losing production with hopes of having it in operation yet this fall.

"As a result of the improvements, the district was able to supply water to the community of Ramona when carbon tetrachloride and benzene were identified in their private wells in 1993. An emergency community assistance grant from Rural Development paid 100%. We were also able to supply



A close up of the tower tank shows the individual panels assembled by Caldwell Tank

farmers, including my parents and my current home, along the way. While the additional users had to pay for the cost of the line from the transmission pipe (in my parent's case, one-and-a-half miles), getting water to these remote users would not have been possible without the Rural Development funding of the Ramona project. By the time the project was completed in 1995, the district was up to 330 meters.

"Our district's original standpipe was a 90 foot tall by 10

foot diameter with a capacity of 56,000 gallons. It cost \$12,420 when constructed by O'Neil Tank when the district was built in 1973. Unfortunately, when the tower water level dropped 20 feet, customers at higher elevations were out of water. Our effective storage was 20,000 gallons! With average usage at more than 100,000 gallons per day and peak usage during chortime morning and evening, that's tight! In 1996, the district installed a propane generator to automatically kick in when the power went out. That improvement has saved us many, many times.

"By 2000, it was time to move on the tower. The Kansas Department of Health & Environment had established the new Kansas Public Water Supply Loan fund. Interest rates were historically low. We filed our preliminary SRF application on September 9, 2002. The actual application was submitted on March, 17, 2003, and approved on April 4, 2003. Specifications and permits were submitted to KDHE on December 8, 2003 and we opened bids on January 24, 2004.

"We quizzed our consultant for several years on towers, the appropriate size and design. It was decided the most efficient and best buy for the dollar would

be a 200,000-gallon tower. The district's average daily demand is 100,000 gallons, so it would meet the two-day storage guideline. A pedestal design would be nice, but we are pretty conservative out here and felt a leg design would be best comparing lower up front cost to higher maintenance at a later date.

"The bids hit before the steel price increases and came in 25% below the engineer's estimate at \$251,700 from Caldwell Tank. There were three bids. We were also fortunate on interest rates, locking in the SRF loan at an effective rate of 3.25%. As a result, we have been able to keep rates reasonable: Benefit Unit: \$1,500 Monthly Minimum (no usage included): \$15.00 Water Rate: \$1.50/1,000 gallons.

"It was interesting to go back through all the issues and timeline. Developing, maintaining and expanding our rural water district has been a challenge. But it's critical to residents. We are fortunate to have a dedicated board chairman, Ken Teetzen, office manager, Autumn Chisholm, and operator Marvin Rediker who all go beyond the call of duty every hour of every day to serve their community."

"Like many other rural areas, we now have a well designed system that provides quality water economically," Mueller says.

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