

# AFTER 54 YEARS, LINN RWD 1 ADDS SIGNIFICANT STORAGE CAPACITY

Originally chartered in 1966 with 75 customers and 108 total water meter services, Rural Water District No. 1, Linn County (Linn RWD 1) has served users in this east-central Kansas water system for the past 54 years. The district serves approximately 525 users in northeastern Linn County and southeastern Miami County to include Linn Valley P.O.A. The geographic area covers approximately 101 square miles. The district currently has two sources of water – one being Public Wholesale Water District 13 and the

other, the city of La Cygne. Average use is approximately 125,000 gallons per day. The district also provides potable water to the KCP&L power plant to the east of the city of La Cygne and the Linn County Park.

When the district was first constructed in 1966, it consisted of one inline booster pump station to pump the water from the city of La Cygne,

**A welder with Phoenix Fabricators & Erectors of Avon, IN welds sections of the new water storage tank in early 2009.**

one 6-foot by 80-foot standpipe and pipelines to serve the 75 original customers. In 1979 the district added a 10-foot by 89-foot standpipe and a second pump station. In 1987 the district added a 15-foot by 76-foot standpipe. In 2008 the district began purchasing most of its water supply from the recently constructed Public Wholesale District 13. In 2009, the district let contracts for a new 250,000-gallon elevated storage tank, pump station, pipeline and control system. Linn RWD 1 has approximately 100 miles of pipeline in the ground at this time ranging in size from 1-inch up to 8-inch.

Operator Mark Patience has been with the district for more than 14 years. He has seen many changes in the district. He looked forward to the advantages of having elevated storage. Mark stated that the district needed the new tower and pump station so it could better serve its customer base today and in the future.

James Challis of Ponzer-Youngquest Engineering, located in Olathe, Kansas, was the consulting engineer for the recently completed, three phase



Workers assemble the 250,000-gallon elevated bowl; the tank is 100 feet tall.



project. The three phases consisted of the 250,000-gallon elevated tower, a new pump station with SCADA and 4.5 miles of 8-inch PVC pipeline connecting the new water storage tank and the new pump station.

The new tank is 100 feet tall; it was constructed by Phoenix Fabricators & Erectors of Avon, IN. Scheduled to be completed in eight months, it took a year to erect the tower at a cost of \$775,075. Most of the delay in the construction of the water tower was due to the poor weather conditions. The site for the tank was purchased from Mrs. Van Vlack, who is also a customer of the district. The only stipulation that she had in selling the land to the district for the tower was that it had to bear the name of the old community that was in that area. So today, the water storage tank bears the name "Jingo", visible to motorists as they pass on US Highway 69.

The second phase of the construction project was the new 8-inch PVC pipeline. Breit Construction of Raymore, MO was the contractor for this phase. Breit was responsible for installing the 4.5 miles of line and four new valves between the new water tower and the new pump station. This phase of the project is still ongoing in May 2010 with trench cleanup remaining. The cost of the new line was \$423,415.

Phase three of the project was the new pump station and SCADA telemetry system. Engineered Systems



**Mark Patience, operator, and Mike Ernst, board chairman, review the screen on the SCADA display inside the new pump station. The station was constructed by Engineered Systems Inc., Riverside, MO; the SCADA was installed by Micro-Comm of Olathe, KS.**

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Inc. of Riverside, MO constructed and installed the new pump station. The pump station contains two, 10 Hp pumps that have an operating range of 200 to 295 gpm. Micro-Comm of Olathe, KS was responsible for the installation of the new SCADA and telemetry system. The cost of this phase of the construction was \$115,000.

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The name JINGO is painted on one side of the storage tank. Doing so was a request of the landowner in memory of the small community in the area.

Financing for the \$1.4 million dollar project came from a \$165,000 loan from Labette Bank in La Cygne and the remaining cost was paid from district funds which had been set aside for capital improvements. Planning for the project began more than five years ago when it was evident that growth in the district would be in the northern part of the district. Engineering studies were completed and a five-year plan was established.

Growth in the number of customers has been fairly constant over the years since the district was formed. As mentioned, the district initiated original service with 108 meters in 1966; by 1990, the district served 317 meters and by 1996, the number of patrons had

increased to 400. The district's board and operator have the confidence that the improvements that have been made to the distribution system are appropriate and necessary for long-term service. It's an example of what can happen when the governing body commits to a long-term program to provide quality water and quality service.

KRWA is available to discuss any community's needs and goals, whether that involves water or wastewater utility or other improvements. Give us a call or send an email; KRWA staff can attend a board or council meeting to help provide referrals to other resources that can be of help.

*Gary Armentrout has been a Technical Assistant for KRWA since December 1999. Gary holds a Class 1 Wastewater Operator certification and worked in a water plant for more than six years.*



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