

# Reno County RWD 3 Replaces Main Transmission Line



Ryan Fry and KRWA's Jon Steele make the final connection on the new 8-inch pipeline for Reno RWD 3. Operator Rick Jensen is the ground man providing tools and parts.

**R**eno RWD 3 is located in the heart of historic Amish country near Yoder, Kansas. The RWD serves the unincorporated town of Yoder which was founded in 1889 by Eli Yoder. It has a variety of unique shops and stores such as handcrafted furniture shops, an old fashioned hardware store, quilt shops, and more. The Parade of Quilts takes place during the entire month of March and the Yoder Heritage Day is the fourth Saturday in August each year. These are interesting, fun-filled days of parades, homemade ice cream, and horse drawn events, quilt auction, etc.

Reno RWD 3 serves on what was the former Naval Air Base which was commissioned in 1942. According to the historical quarterly, Naval Air Stations in Kansas During World War II, by R. Douglas Hurt, citing the *Annual Report of the Secretary of the Navy, 1946*, pp. 4, 22; "Progress of Naval Aviation," p. 32; "when the war ended in August 1945, there were 168 naval air stations and 325 outlying fields in operation across the United States. However, by June 30, 1946, less than 30 stations and only 98 outlying fields remained at full operational status. With the war over, Congress became intent on reducing federal expenditures; demobilization proceeded and more naval air stations were rapidly deactivated."

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Today, most of the original structures have been dismantled but the old air traffic control tower and a few of the original buildings are still standing including one that houses what once was the largest indoor swimming pool in the U.S. Today the former base is an industrial tract and residential area. Businesses including ambulance and bus-builder Collins Industries, Hutchinson Community College Agricultural Department, Diesel Mechanics, and Fire Science Training occupy the site. Presently, the largest venture on the base is the newly expanded State of Kansas Law Enforcement Training Center.

The original water system was more like that of a small city – with a fire chief in charge of the design of the water system instead of a rural water district. With its fire hydrants and large diameter lines, it was a heavy-duty fire suppression system; water for domestic use seemed to be a secondary thought.

The system consisted of two wells with 30-HP motors about four miles north of the base. The wells pumped into a 400,000-gallon storage tank. The water was then re-pumped by four, high-capacity service pumps that operated 24/7 to maintain pressure on the system since there was no elevated storage. The high service pumps pumped through a network of 8- and 10-inch cast iron pipelines, servicing all the



Reno RWD 3 Operator Richard Jensen stands near the "Road Closed" barricade he set up during a prior break of the district's 8-inch main transmission pipeline between the wells and customers. Reno RWD 3 serves the old naval air base south of Hutchinson. The county road was unimproved at the time of the original installation. Due to expense of repairs and need to re-reroute traffic during any repair, the district embarked on a project to replace the line onto private property.

structures and forty-five fire hydrants. Some of the fire hydrants have been eliminated.

In 2000, Reno RWD 3 made several improvements and upgrades to the system including a new 50,000-gallon elevated storage tank, new electrical controls, and some metering that had not previously existed. Several more customers were added along the transmission line that is now a fully pressurized line. The wells pump into the ground storage tank as before but a special automated valve was added to isolate the ground storage tank and allow for full system pressure to be applied to the transmission line all the way back to the check valves at the wells once the pumping cycle is completed. The high service pumps cycle as needed to resupply the storage tank.

### Problem pipeline

In recent years, the RWD has had several major leaks along the first section of the transmission line with repairs costing about \$20,000. The first section of 8-inch transmission line was installed directly under Trails West county blacktop road, which was an unimproved road during the original construction. Repairs on the pipeline required that the road be completely closed and traffic re-routed, much to the chagrin of local travelers. The RWD board and operator decided it was time to install a new line on private property. A plan was developed after several board meetings and meetings with the operator.

The first step was to obtain easements from the landowners; I provided examples of easement forms used by other districts. After meeting with the landowners, two signed. A third asked for free water for himself and another family member. The

RWD board declined that request and decided just to install the pipeline in public road right-of-way past that property.

A local contractor, who is also a certified water operator, was hired to assist with the project. The original lines remained in service during construction. The original line was all 8-inch but this was overkill on a water source that produced 300 gpm or less. As a result, the district reduced the size of the new line to be a combination of 6- and 8-inch. A hydrant was installed at a strategic juncture to allow for

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line flushing and for filling fire trucks. This was requested and paid for by the local county fire department. Isolation valves were installed in a manner that would allow the wells to operate independently. Restraining couplings and thrust blocking was used at all elbows and Tees. All lines were properly bedded.

The tie-in to the original line going south was somewhat challenging since there were several phone lines and a high-pressure gas line in close proximity. Lots of thrust blocking was needed to allow connection of the new hydrant to an original section of pipeline which was almost ten feet deep.

Following installation of the pipeline, the line was disinfected and flushed. Bacteriological samples all proved negative. The finale compaction and dirt work were then completed. It is difficult now to determine where any excavating has even been done. Doing a good job on trench clean-up goes a long way towards water systems having good public relations with those landowners who granted easements.

I enjoyed assisting the water district with the planning and construction of the line. This was a situation where self-help and self-funding worked out great. The result is that RWD 3 has ownership and a greater appreciation of their water system. All parties involved, from Inman Excavating to the board and operator and landowners, had good

communications before and during the project. The system's operator and one of the board members completed the plumbing in the well house. Just less than 3,500 feet of new

pipeline were installed. Hopefully, Reno RWD 3 will not have any future breaks on the new line, and for sure, if there are, the district won't be excavating in the center of a county blacktop roadway to make repairs.

I want to encourage operators, managers, board and council members of cities and rural water districts to attend the upcoming KRWA Annual Conference and Exhibition in Wichita, March 29 –

31. The conference is not just for operators, managers and clerical staff. It's for members of governing bodies. Governing bodies are responsible for making the decisions in local water and wastewater systems. There are dozens of sessions at the conference that can benefit any governing body member.

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*Jon Steele has been employed by KRWA as a Circuit Rider since 1995. Jon is certified as a water and wastewater operator. He has more than 25 years experience in public works, construction and industrial arts.*



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