

Stimulus or not, many communities are making improvements

Improvements to municipal and rural water systems seems to be a topic that is being discussed a lot lately, not only due to the new Ground Water Rule but also because of a number of other reasons. Many systems are aging; problems are cropping up for them with greater frequency. Several communities have decided to improve pressure by erecting additional storage tanks. I hope that those communities have considered that there may be additional stress on mains and the plumbing in older homes as a result. Regardless of the reason, it is somewhat refreshing to see so many communities and RWDs doing what is needed to keep their utilities updated and running well to provide safe water for their customers.

Whether a town or RWD pursues a project should not be limited because

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of the lack of funding. Sometimes, the first question that the elected officials want to know is if there will be a grant to construct the improvement. While funding is always important for a project, systems need to evaluate what they need to do first and worry about the funding after that. KRWA receives calls nearly every day from a water or wastewater system asking about

obtaining grants. In some cases, those communities have not yet had an engineer look at their project or even decided among themselves what is needed. The right approach is to figure what the system needs first; then seek the funding. Financing has never been more available than it is today. There are several ways and places to get funding for water systems. It is essential that all systems do

whatever is necessary to operate efficiently and to meet the needs of the customers.

Water loss, a perpetual problem

Water loss is another issue that some systems are seriously addressing. If a system is showing a high water loss it can be traced to a number of contributors. One of the main contributors to unaccounted for water loss is that many systems have old meters; a high percentage of those meters are not registering correctly. Meter change-out or testing should be part of a maintenance program. If the city or RWD waits until there are excessive unaccounted for losses, then the system has more than likely already lost enough revenue to have paid for new meters. Although metering is not always the problem just remember not to neglect them.

In my recent work with KRWA, I have seen several major improvement projects; they are all very impressive. The technology in the new equipment is making the operation and maintenance of utilities more efficient. From an operator's standpoint, I think that is great. One of the best applications is the installation of variable frequency drives (VFDs) on



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pumps; they are just awesome. They take a lot of pressure off of a system in start up and shut down, and from what I have learned systems have fewer leaks and breaks on mains. There's another article in this issue by KRWA Tech Eric Davolt that provides a case study on a project in southeast Kansas that recently installed VFDs.

I thought you might be interested in becoming more familiar with a few of the improvement projects taking place in north-central Kansas.

New tank, pump station in Jewell

The city of Jewell was awarded an Urgent Need Community Development Block Grant from the Kansas Department of Commerce in July 2008 to replace the city's water tower and the booster pump station that is owned by Mitchell RWD 3. The RWD supplies water to the city. The tank and pump station were destroyed by a tornado on May 29, 2008. The total project cost was \$614,300; the city's share was \$294,000; CDBG funding was \$320,300. The grant administrator is the North Central Regional Planning Commission, Beloit, Kansas (Sara Crangle); Stuart Porter with Schwab-Eaton, P.A. is the engineer (Beloit office). Contractors for the project include Gerard Tank & Steele, Inc.,

The tank and pump station were destroyed by a tornado on May 29, 2008.

Concordia, KS and J & N Elliott Construction, Inc., Morrowville, KS.

The project is nearing completion; the 50,000-gallon water tower and booster pump station are now in use.

Jewell Mayor Bill Loomis states that Jewell was fortunate to have received an urgent need grant and was pleased that Mitchell RWD 3 was able to furnish water directly to the city without difficulty during the time the tower and pump station were being constructed.

New elevated storage in service at Hanover

The city of Hanover received a \$200,000 grant from the Dept. of Commerce to construct a new water storage tank. The new tank replaces the old standpipe to provide residents improved and more consistent pressure. The 100,000-gallon tank was put in service the end of July. When doing so, the city noticed a significant pressure increase in certain parts of the town in lower lying areas of the

city. There were a couple of older homes that had some failures of internal plumbing as a result of the increased pressure. Although the peak pressure increase from the new tower should have only been a three or four psi, the pressure was constant with the new golf ball style tower unlike the old standpipe style, where the pressure fell off more rapidly and maintained a lower pressure. The project cost was approximately \$500,000; the city obtained a loan of \$300,000 through the Kansas Public Water Supply Loan Fund administered by the Kansas Department of Health and Environment. The project was bid at a time when steel prices were extremely high.

The contractor for the project was Maguire Iron of Sioux Falls, SD; the engineer was Chris Cox with Schwab-Eaton, PA, Manhattan, KS. Deb Ohlde with North Central Kansas Planning Commission, Beloit, proved grant administration.

This photo shows the city of Jewell's new tower and city building; Jewell lost its tank in a May 29 2009 tornado.



A new 100,000-gallon elevated tank in Hanover replaces a standpipe; the contractor was Maguire Iron of Sioux Falls, SD.

Marysville has new tank under construction

The city of Marysville is in the process of erecting a new 500,000-gallon water storage tank on the east edge of the city to help meet the increased demand. The city annexed a majority of customers of the former Marshall RWD 2, acquiring all assets. The city connected the RWD system to the city's water system. The new tank replaces a standpipe that had served the area east of town now inhabited by major industries and commercial businesses. The city also completed the installation of a new 10-inch main from a new well to a pump station to supply the new tower. This project will also include the refurbishing of the city's existing 500,000-gallon storage tank. The total cost of the project is to be around \$2,000,000 with the city approved for a loan from the Kansas Public Water Supply Loan Fund.

Contractors for the project include Chicago Bridge & Iron (CBI) on the tank; Clarke Well & Equipment, Great Bend, KS has the well project; Maguire Iron, Inc., Sioux Falls, SD will refurbish the city's existing tank and the waterline installation will be made by Vankirk Bros, Sutton, NE. The engineer for the project is Olsson & Associates. There were no grant funds involved in the Marysville project.



These new high service pumps are part of a new storage tank and pump station improvement project at Belleville, KS.

Belleville gets new tank and pump station

The city of Belleville in Republic County received a \$400,000 grant for system improvements from the Kansas Department of Commerce for the construction of a new storage tank and pump station. The old concrete tank and pumps had been an operational burden for years because the pumps would lose prime and would have to be re-primed daily and checked frequently. The tank was leaking and had already been repaired several times and was becoming an issue for

lost water. The city also rerouted the pipeline that supplied the tank from under the power plant as part of the project.

New VFDs on the new pumps and the monitoring and call out system are a big asset on the new system and provide a peace of mind to the operators to know the operating conditions even when the operators cannot be onsite, says Steve Cooper, Plant Manager. The total cost was around \$800,000 to complete.

The contractor for the tank was Gerard Tank & Steel, Inc., Concordia, KS; the pump house contract was with J & N Elliott, Morrowville, KS; the project consultant is Stuart Porter of Schwab – Eaton, P.A. Grant administration was by Bill Strait, Salina, Kansas.



In late August construction began on an additional new 500,000-gallon elevated storage for the city of Marysville.

Greg Metz joined KRWA as a Technical Assistant in July 2009. He previously worked at the city of Washington for 13 years where he was involved in city utilities including the power plant, streets, water and wastewater. He also served as purchasing agent for those utilities.

