



# City of Highland Completes Water System Upgrade

**T**he city of Highland, population 1,012, recently completed a significant upgrade of the municipal water system. Highland is located in western Doniphan County in extreme northeast Kansas and where it is not uncommon for farmers to have 175 to 225 bushel corn on generally dryland farming. Highland is a center for a solid ag-related economy.

Highland is also home to Highland Community College – “the oldest college in Kansas” as the sign along old US Hwy 36 through town proclaims. The college provides many opportunities to community personnel and others. Highland Community College gives a solid base to individuals wanting to further their education.

Highland Community College was the impetus for the city’s recently-completed water improvement project. Approximately five years ago Highland Community College made an important decision to build a large community Wellness-Fitness Center on the west side of its campus. With the addition of the Wellness Center the city of Highland made the decision to improve the northwest portion of the city’s water distribution system by looping one-fourth of the city and installing larger water mains.

**This 125,000-gallon storage tank was one aspect of the recently completed water system improvement project at Highland, KS. Additional improvements were made to the distribution system. The project totaled \$1.3 million and was funded through loans and grants from the USDA Rural Development and Kansas Department of Commerce.**



Fast forward five years to today. The remaining portions of the city of Highland were in desperate need of an upgrade to mainly improve the water quantity to the patrons, increase the size of water mains and finish looping the distribution system. The city has a 100+ year-old water tower that provided lower than desired water pressure throughout the town. Not only did the city receive complaints of low pressure from the city's residents but the major problem with the low pressure was at Highland Health Care; the facility has automated flushing bathroom facilities. When the city would flush hydrants or experience a fire within the city causing extreme water usage, the resultant low pressure at the care home would trigger the bathroom fixtures to begin flushing. The practice of resetting them required manual attention. While that was not impossible, it was an indicator that water pressure had dropped below reasonable expectations.

In 2011, the Highland's city council made the decision to move ahead with a water system improvement project. The governing body began by attending a Kansas Interagency Advisory Committee (KIAC)

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meeting and filing an application for funding with USDA Rural Development. In 2012, the city of Highland was awarded a \$500,000 Community Development Block Grant from Kansas Department of Commerce and a loan from USDA Rural Development for \$805,000. BG Consultants Project Engineer Brian Kingsley estimated total project costs at \$1.3 million.

Bids for the project were opened on March 6, 2013. Banks Construction of Holton, KS was awarded the water line project with a bid of \$450,157. Maguire Iron, Sioux Falls, South Dakota, was awarded the 125,000-gallon water storage tank project with a bid of \$583,000. Both bids were below estimated project costs. The additional funding allowed the city to make additional improvements within the city. The project consisted of replacing 7,500 linear feet of water mains, replacing 20 fire hydrants, and installing 60

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new valves. An added plus for the city residents with this project was the installation of 10 new additional fire hydrants throughout the project. Thanks to the lower bids, 52 lead service lines were also replaced.

Mayor Kenneth Stewart commented that the water system upgrade project has been a major improvement for the city. "Replacing the old dilapidated system not only improved the water pressure issues, but it's saving the city time and money on repairs and city crew man-hours," Stewart said.

The city of Highland remains concerned about the nitrate level in the city's well water. Because of that, the city has chosen to enter into an agreement with the developing

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Doniphan County Rural Water District No. 6 to have an interconnection with the district to purchase water to blend with the city's water to lower the nitrate level should the nitrate level go above 10 mg/L. The interconnection is being designed in a way so that water can also be provided to the RWD in case of an emergency. Doniphan RWD 6's project will include two new wells located approximately five miles

northeast of Highland.

The final inspection for the city's water improvement project was held January 30. Should you find yourself traveling along Highway 36 heading east come visit the city of Highland where "Learning to Live is Living to Learn!"

I have enjoyed working with Highland as their project was considered, through the planning stages and funding application. USDA Rural Development's funding and the Department of Commerce's CDBG grant made it all possible. If your community has needs for improvements, I encourage you to contact KRWA for a down-home friendly discussion. KRWA can provide backgrounds on all the funding programs, run quick rate reviews, and help introduce you to the various funding programs. Also, I encourage readers to attend the Annual Conference & Exhibition, March 25 – 27 at Century II Convention Center. All funding agencies will be attending this conference. They each have a breakout session and you can also then visit extensively with them in these booths in EXPO Hall:

- Kansas Department of Commerce: Booth 122
- Kansas Department of Health & Environment: Booth 115
- USDA Rural Development: Booths 140-141

It's a great conference. I am confident you will be glad you made the investment of time to attend. The anticipated attendance is 2,200.

*Rita has extensive municipal experience with the city of Troy, KS for eleven years. She was a certified EMT and served as the Ambulance Director for two years and supervised the volunteer staff. Rita also worked on or completed most water and wastewater utility reporting requirements. Her focus at KRWA is to*



*provide assistance with applications for funding for cities and rural water districts.*

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