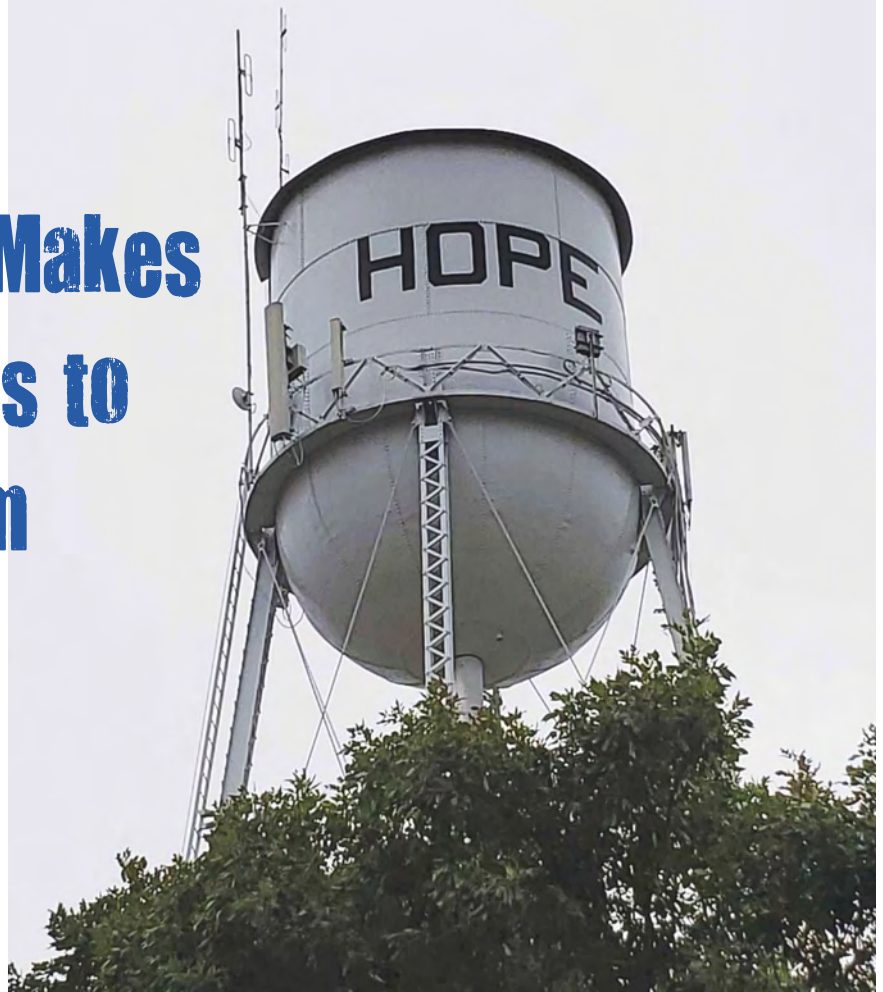


# City of Hope Makes Improvements to Water System



The city of Hope has made improvements to its water distribution system and elevated water storage tank. Hope is located in the southeast corner of Dickinson County and has a population of approximately 375. The project cost about \$1.95 million. The project was funded with a \$600,000 Community Development Block Grant administered by the Kansas Department of Commerce and a loan of \$1.357 million from USDA Rural Development. The interest rate on the 40-year, USDA loan is at 1.78 percent.

The city's elevated storage tank was rehabilitated as part of the project.

The project included replacing 22,000 feet of six, four and two-inch cast iron mains with PVC. Approximately 3,000 feet of the existing two-inch pipeline was reconnected to the new system.

The project consultant was BG Consultants from Manhattan. J&K Contracting from Junction City was the general contractor. The maintenance on the storage tank was performed by Central Tank Coatings from Elgin, Iowa. The work was completed in June 2020.

Hope purchases approximately 13 million gallons of water a year from the city of Herington. Hope is connected to the Herington water supply with ten miles of six-inch PVC pipeline. The supply flows into a clearwell and then is pumped into Hope's distribution system using high service pumps. Originally, Hope had its own wells but because of high nitrate, the city was forced to find an alternative water supply.



A "project sign" is required when Kansas Dept. of Commerce funding is involved.

## Pump Total

<u>Year/Month</u>	<u>Purchased</u>	<u>Sold</u>	<u>Loss</u>	<u>Pct</u>
2019/05	999,800	536,438	-463,362	-46.3
2019/06	1,457,400	920,583	-536,817	-36.8
2019/07	1,698,000	964,520	-733,480	-43.2
2019/08	1,316,600	923,360	-393,240	-29.9
2019/09	1,057,700	611,082	-446,618	-42.2
2019/10	1,068,500	558,604	-509,896	-47.7
2019/11	923,200	471,793	-451,407	-48.9
2019/12	828,900	1,119,307	290,407	35.0
2020/01	554,700	801,278	246,578	44.5
2020/02	589,100	564,408	-24,692	-4.2
2020/03	540,000	511,656	-28,344	-5.2
2020/04	901,400	884,450	-16,950	-1.9
2020/05	1,020,900	998,507	-22,393	-2.2

### Sold vs Purchased



This summary report shows the improvement in unaccounted for water loss. New AMR-type meters were installed in February.



Hope's City Clerk Joni Rikard and Mayor Larry Ryff smile for this photo just after signing off on loan documents on their water system improvement project on September 28, 2020.

The project also included replacing 130 water meters. The meters that were installed are 3/4-inch Sensus IPERL meters. They have upgraded to a radio read drive by system. What used to be a week of reading meters has now been cut down to a couple of hours. This should allow the operator to be able to perform other tasks. The meters that were replaced were more than twenty years old and it was suspected that they were no longer very accurate. As evident in the table provided by the city, the water loss ranged between 29 to 48 percent. The loss now is less than five percent. Doing the math, the city should be saving more than \$20,000 a year on water that was purchased and lost. The meter change out was completed in February and that is also when the improvement in water loss reduction began. While it is not completely determined that the improvement in water loss is due to the meter replacement, however the amount of water purchased is nearly the same amount of water based on prior

monthly and yearly totals.

The overhead storage tank was also rehabbed. The inside was recoated, and the outside received a new coat of paint. There were also some patches that needed to be completed.

Remember that KRWA has qualified staff to assist any system with information and help on loans, grants, and rate studies. Please feel free to contact any staff member or the office if you would like to take advantage of this assistance.

*Bret Beye joined the KRWA staff in March 2017. He previously worked for 30 years at the city of Herington where he was Water Distribution and Sewer Collection Foreman. A Class III water operator and certified as a backflow device technician, Bret also served on the USD 487 Board of Education from 2003 to April 2017 where he was board president and vice-president.*

