

KRWA GPS Mapping Always Busy

New GPS mapping projects have been on the upswing this year for KRWA. With more than 340 projects already completed, KRWA usually stays busy just keeping up with making the updates for those systems across the state. It is good to see systems realizing the benefits of GPS mapping, and making the jump into the digital era. I want to use this article to focus on the different mapping projects KRWA has going on this year, with the size and scope, and reasons systems are pursuing moving to the digital mapping.

My first project this Spring was in Morris RWD 2. This district is a new project with construction only completed last winter. The district is situated toward the south side of Morris RWD 1 and also purchases water from No. 1. Morris RWD 2 is relatively small in geographic area with 40 meters and a just more than 16 miles of distribution lines. Morris RWD 1's Manager Steve Euler, is also tasked with maintaining the new district. Steve had KRWA map Morris RWD 1 back in 2008, and has had KRWA keep the mapping data updated for Morris RWD 2. Steve uses his digital data daily with Google Earth, and another free viewing software named TatumGIS. He did not want to be without these advantages working for the new district. With trench lines still fresh, collecting data went smoothly by driving all the lines with KRWA's UTV, while also collecting meters, valves, and all other features.

The City of Bern was next on the work schedule. That project was a focus of my last article in the July issue of The Lifeline. Rob Myers, operator of Bern's system, intended to have the water system mapped prior to the local



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telecommunications cooperative bringing fiber-optic cable to town, which was supposed to happen in 2021. As is the case with a lot of other industrial supplies today, according to Rob the cable is on back order, and he's unsure of when the fiber project will get started. KRWA was able expedite this project due to the small size of the project, and being just fifteen minutes from the KRWA office at Seneca, and because of the situational importance at hand. The water system data is now collected though, instead of the city having just one old paper map. The digital data can be shared with the planners and installers when the time comes to help avoid unnecessary water line breaks.

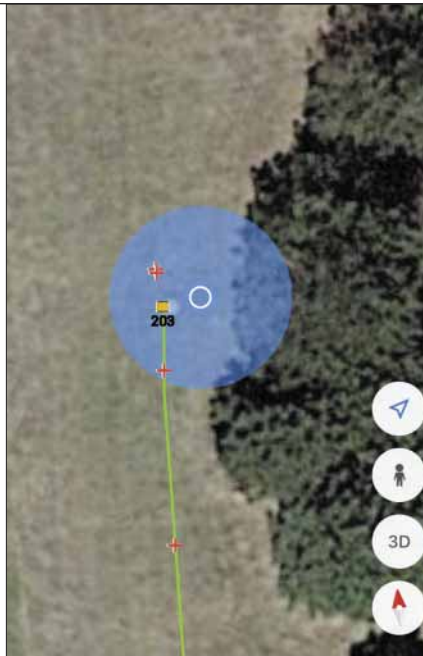
Next in line was Barton RWD 2 and Barton Community College (BCC), which are situated on the north side of Great Bend. This water system is one of the more unique projects that I've ever worked on. Both systems are tied together with an 8-inch water line, with a meter separating the systems that can read both directions. The college operates two wells, with the storage tank being on their property. Barton RWD 2 operates one well. If there are issues going on with either system's wells, the system can supply either way while being metered. The college sits on the east end of the entire system, with Barton RWD 2 being made up of four separate subdivisions to the west. The entire system is contained in a two-mile area. Jim Lloyd has been the

operator for Barton RWD 2 for more than 40 years and knows the system locations extremely well. Planning for the future, the board recognized that Jim is really the only person who knows where any valves, meters, and lines are located, and having GPS data for all of this would be invaluable. Mark Dean, Vice-President of Administration for BCC, also knows the water and wastewater system locations of the college better than anyone. Mark is also on the board for Barton RWD 2, and decided to proceed with mapping the ww system for the college at the same time.

The City of Washington replaced most of their water system over the last two years. KRWA completed mapping of the original system back in 2013. Carl Chalfant, City Administrator, tried and succeeded in using some of the excess funds to cover mapping of the updated system. Prior to working for Washington, Carl was the Utility Superintendent for the City of McLouth. KRWA also completed mapping for McLouth back in 2008. After having managed the utilities in McLouth for that many years with GPS data and a GIS, doing so without it was hardly an option if you ask Carl. I collected all of the new meter locations back in June, and am scheduled to return to collect all of the new valves, fire hydrants, and line locations in early October.

Smith County RWD 1 decided to pursue mapping with KRWA last spring

for many of the same reasons mentioned in other projects. Data collection of Smith RWD 1 took place in mid-August, and took about five days. Bruce Nech has been the operator/manager of the district since the district started selling water in 1986. Bruce is planning to retire in the next few years. As is the case in a lot of the systems mentioned in this article, Bruce is the only person who has any real knowledge of where the district's facilities are located. Tracy Kingsbury, who also operates Kingsbury Plumbing out of Smith Center, has been the contractor doing new meter installs and repairs for the district over the years, and has been learning as much as he can from Bruce, anticipated Bruce's retirement. As anyone who has been an operator of a RWD can attest, it just takes time to learn where everything is in the system, but by capturing everything Bruce knows with GPS coordinates and having it readily available on a phone, Tracy and anyone else in this situation are going to be way ahead of the curve. The district takes up most of Smith County and extends into Phillips County a little, so having somebody learn where every



This screenshot taken by a phone while using Google Earth shows a water meter location. Clicking on the meter, any information that is tied to that location is accessible to the operator.

meter, valve, and water line is in that large of area is no small task.

This summer Washington RWD 2 signed up to do mapping with KRWA as well, which I'll be collecting in October. This is another fairly large district that covers the southern half of

Washington County stretching into northern Clay County. The City of Damar also signed up last Spring and was collected last July. I also have a handful of projects wanting updates collected that I'm going to be doing this Fall. I've always liked going into winter having plenty of data to work on, and that has been the case this year, and pretty much every year I've worked for KRWA. Even with the large number of projects KRWA has mapped over the years, there are still a lot of systems that still using old paper as-builts, along with any newer additional project maps.

If your city or RWD has been considering moving its mapping into the digital era, give us a call at 785.336.3760 or email directly to me at mark@krwa.net and we'll start the conversation.

Mark Thomas has been a GIS Mapping Tech since September 2006. Mark has a bachelors degree in geography from Kansas State University and has specialized studies in ESRI's ArcView and ArcPad software.



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