

# GPS Mapping Is Not a One-Time Event

**W**ith the Public Water Supply System GIS Mapping Assistance Program from the Kansas Water Office ending, the requests for new mapping projects by systems have noticeably decreased. Because numerous systems took advantage of the subsidy program, KRWA still has some of those qualifying systems on the worklist still to be completed. In addition to those new projects, cities and water districts that have already been

mapped make frequent calls to KRWA for additional work to keep their mapping data up to date. These systems recognize that having current data is crucial in asset management. Information such as what you have, where you have it, how long its been there, and accessing that information in short order makes everybody's job much easier when working with utilities. Not having that information current can significantly hinder decision-making, especially

concerning requests for locates of utilities.

Every RWD or city is different concerning how much change has taken place within their utility systems. A lot of that depends on the size or location of the system. Many managers and operators ask the question, "How often should we have you come back to collect updates?" KRWA's answer is that we try to coordinate work among systems to reduce travel costs. It doesn't make sense for me to drive three hours to do one hour of work. Many times though I'm able to tag an update project along when I'm out collecting new projects. This happens a lot with projects in southeast Kansas, because KRWA has worked on numerous projects in that area. It is feasible for systems there to have a half-day or less of data collection because of the shared travel costs. However, systems in the western half of the state would want to have a full day or so of work with updates because there are just fewer systems to share costs in western Kansas.

Anyone who has gone through the GPS collection process with KRWA knows that it is important to have infrastructure located beforehand. KRWA Mapping works at a rate of \$50 per hour, so spending a lot of time with metal detectors isn't going to benefit anyone. That same collection process should be applied when working with updates. Having a plan, especially when working in large RWDs, so that we can work our way throughout the district without much backtracking can save the system time and money. Aside from the aspects for getting this done



GPS Mapping Coordinator Mark Thomas digs for a valve riser after locating it with a metal detector. Having infrastructure located beforehand is important to the process of GPS collection.

efficiently, it is most important to just get it done, and keep getting it done.

As I've stated in numerous KRWA articles, GPS mapping is a process, not a one-time event. As cities grow with new subdivisions, and RWDs keep extending lines to reach new customers, it is of course important to collect this data and incorporate it into the GIS. Just as important, maybe even more so, is to keep track of repaired locations in old sections of the system, and make sure these locations are collected as well. Almost every system has an operator who has an area where he/she is not real sure where the waterlines are located. When these locations are revealed with leaks or other work, why not take advantage of today's technology and log the precise location, what was done to fix it, and when it happened? That particular waterline is no longer a head scratcher for the current operator, but by using GPS and GIS, it won't be a head scratcher for future operators either.

At the end of every project systems can purchase the different paper map products KRWA produces, and updated

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systems can receive the updated pages for their mapbooks. I realize that paper maps have helped people get from point A to point B since well before Christopher Columbus' voyage, but there is only so much a paper map can reveal, especially when it comes to utility mapping. I also realize there are many utility operators who like to use a computer as little as possible. That is why KRWA tries to keep things as simple as possible by setting systems up with Google Earth at the end of the project. And don't forget, Google Earth is without cost! Users are able to view exactly what is on the paper maps with high resolution, and current, aerial photography in the simplest format possible. With the click of a mouse,

users can find out when a leak was fixed, what type of line it is, how it was repaired, etc. If all of this information were to be revealed on a paper map, the only thing visible would be text boxes. The sky is the limit when it comes to how much data can be incorporated into a GPS mapping project, and KRWA will take it as far as the process will allow.

If your city or RWD is interested in GPS mapping, I encourage you to contact KRWA. KRWA has mapped nearly 300 public water, wastewater, gas, stormwater and other utilities. And don't forget, the system owns its data when KRWA provides GPS mapping services. Email me at [mark@krwa.net](mailto:mark@krwa.net) or call the office at 785-336-3760 for more information.

*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.*



## The History of GPS Mapping at KRWA . . .

In 2001, the Kansas Corporation Commission (KCC) requested KRWA to consider working with the agency in an application for federal funding to provide technology for KRWA to map water utilities using GPS/GIS technology. KCC was successful in that funding application; KRWA developed a demonstration mapping program using those resources. Presently, the Association has conducted GIS services for more than 300 cities and RWDs. These services have included GPS data collection, digital map interpretation and integration, production of hard copy maps and the assistance to procure funds through the Kansas Water Office's GPS mapping subsidy program. Additionally, KRWA has supported the Kansas Underground Utility Notification Center by electronically transferring system mapping data of both water and wastewater systems directly to the notification center.

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