

PWWSD 25 – Two Rural Water Systems Join Together to Become a Public Wholesale Supply District

Douglas Rural Water District No. 5 was originally formed in 1976; located just south of Clinton Lake, Lawrence. Douglas RWD No. 5 purchases water from the city of Lawrence; whose source is the Clinton Reservoir. Douglas RWD 5 currently serves 1235 customers and sells retail water to a small portion of Douglas RWD 2 south of Lawrence along Highway 59.

Osage Rural Water District No. 5 was started in 1960 near Overbrook. Osage RWD No. 5 purchases water from the Tri-District at Clinton Reservoir and the city of Carbondale, and utilizes wells of their own. Osage RWD 5 serves 1550 customers and has a water connection to the city of Overbrook. The two water districts combined covers 290 square miles in Osage, Franklin and Douglas counties in NE Kansas. In 2006, Public Wholesale Water Supply District No. 25 was formed when the two districts united.

The two districts after much discussion decided to form the Public Wholesale based on purchased water costs, water availability and not being able to add new customers. At the time of discussions and forming PWWSD 25, the city of

Lawrence had a contract provision for Douglas RWD 5 that limited the district to only eight new customers per year. With this provision the district could not grow and was being approached on a regular basis for new customers. Since then, city of Lawrence has removed that particular provision from the contract. Osage No. 5 was having difficulties being able to purchase enough water from Tri-District; water was costly from the city of Carbondale along with managerial issues.

PWWSD No. 25 construction will consist of a new water

supply and treatment facility, approximately 33 miles of distribution line to connect the district, storage tanks and two booster pumps. The overall cost of the project is \$23,372,000. The project bid opening was held on December 15, 2016 at the Bartlett & West office in Topeka.

Six contractors were successful bidders for the construction of the project.

- Crossland Heavy Contractors, Kansas City, MO bid of \$8,968,586 will construct the water treatment plant, lagoons and demolition site work.
- MConn, LLC, Wathena, KS bid of \$3,199,011 will construct the 16-inch and 14-inch transmission mains.
- Ditch Diggers, Salina, KS, successful bid of \$3,228,330 will install the 12-inch transmission main.
- Cahoy Pump Services, Inc., Sumner, IA, had a successful bid of \$227,905 to install the three groundwater wells.
- Great Plains Structures, Vадnais Heights, MN, successful bid of \$747,965 for the construction of the 750,000 gallon steel ground storage tank and a 300,000-gallon steel standpipe.
- Banks Construction, Holton, KS, bid of \$1,665,725 to construct the 10-inch and 6-inch raw waterline, 8-inch transmission main, electrical and booster pump station, metering stations and driveways.

One of the neatest features of this PWWSD 25 project is that Alan Soelter, Soelter Services Group, LLC, developed an app/link so all concerned can keep track of the project. In the link you can see what construction has been completed, view inspector reports, etc. I contacted Alan Soelter and he provided an explanation of how the link works. This link would be a great tool for other systems as well to watch this project be constructed. It is as follows:

Easement/Project Status Viewer

This tool was developed with multiple uses in mind. First, it allows the construction observers to have electronic access to the easements by simply tapping the parcel in question. This eliminates a tremendous amount of time (and confusion) by doing away with the “box full of random easements”. The second use of the viewer is to allow board members, funding agencies, attorneys, and other individuals associated with the project to view the current status of the project at their convenience. This eliminates the numerous hours spent at board meetings discussing progress being made by contractors. Yet another use is to allow employees performing GPS mapping to visually see the areas of the project that have been previously mapped.



MConn, LLC., Wathena, Kan. prepares to make a bore for a pipeline crossing.



Pipe for the new Public Wholesale District No. 25 is stored adjacent to Highway 59 south of Lawrence.

The viewer is written in standard HTML 5.0 and Javascript which allows viewing on desktops, laptops, and mobile devices. It incorporates the Google Maps Application Program Interface (API) to display the desired base map. The base map can be toggled between Satellite/Aerial Imagery or Terrain mode. A shapefile reader was written to import the proposed pipeline route (shown in blue) and the progress to date (shown in green).

GPS data is gathered utilizing a real-time sub-meter GNSS receiver with Collector for ArcGIS. The pipeline data is then updated using ERSI ArcMap software. The revised shapefile is then uploaded to a File Transfer Protocol (FTP) site where it immediately becomes available for viewing.

Future enhancements will include interactive project photo viewing to further inform interested parties of issues that arise during construction.

Construction Observation Report Viewer

This second tool was developed to organize and publish construction observation reports. Reports for each day of the week are scanned to a PDF document and uploaded to an FTP site. A special naming convention is used to identify the contract and range of dates included in each scanned file. Once the files are uploaded they are immediately available for viewing. The reports can be selected by month and year to make the large list of reports over the course of a project very manageable.

The viewer has eliminated countless photocopies being mailed to funding and regulatory agencies which require the reports. It greatly improves the availability and rapid accessibility for engineers, board members, and construction observers as well. Again the viewer is written in standard HTML 5.0 and Javascript so the same ability to use it on desktops, laptops, and mobile devices exists.

In this case, since the Engineer is providing construction observation for much of the project other than the pipeline installation, they have been provided access to the FTP site as well. This allows all of their reports to be uploaded in the same manner independent of Soelster Services Group, LLC.

Financing for this project is through USDA Rural Development. Interim financing is provided by Kansas Department of Health and Environment State Revolving Loan Fund. Soelster Services Group, LLC, is providing the inspectors for project observation. Bartlett & West, John Ruckman serves as the engineer/engineering firm.

Rita Clary's focus at KRWA is providing assistance with applications for funding for cities and rural water districts. Rita gained extensive municipal experience working at the city of Troy, Kan. for eleven years prior to joining KRWA in 2009. She is a certified EMT and served as the Ambulance Director for two years and supervised the volunteer staff at Troy. She has worked on or completed most water and wastewater utility reporting requirements.



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