Oxford Water Works & Sewer Board Unlocks the Power of ArcGIS® for Water Utilities

Oxford Water Works & Sewer Board is located in Oxford, Alabama – about an hour east of Birmingham, Alabama. Oxford has a population of 22,300 and Oxford Water has about 9,800 water customers in the community.
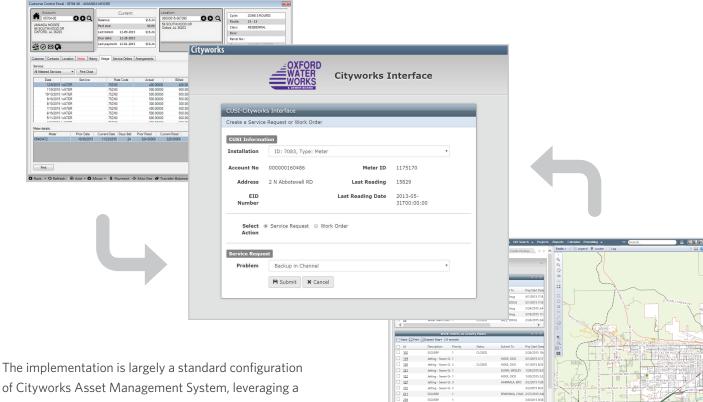
A few years ago, Oxford Water was facing a number of data-related challenges. With no GIS, teams were relying on old CAD maps, hand-drawn valve location drawings, and very few as-built maps. Their field crews were working off of memory and old paper maps that were in poor condition...and the GPS equipment they eventually purchased for locating assets was not providing the accuracy they needed. The equipment was also cumbersome to work with, as it required quite a bit of the data to be hand-typed into their database. Even their billing system, at the time, did not make it possible for the transfer of data – so all of it needed to be hand-typed into their database. They needed help creating a far more efficient data environment that would cut down on the workload and provide easy and accurate access to the wide variety of people who would need it.

To meet their challenges, GISinc traveled to Oxford to take a look at the data environment Oxford Water had in place and plan the road ahead. After offering suggestions, solutions, and analyzing their data transfer issues, we got to work on a plan of action that involved setup of Esri's Local Government Information Model (LGIM).

We initiated and applied a few editing templates and ETL tools to make data transfer easier from the data collectors to the database. Since the setup of LGIM, we have worked with Oxford Water on additional solutions for online mapping and data collection applications for field crews – as well as other team members who need access to the data.

Today Oxford Water is up and running. With an upgrade to Enterprise Server, their editing environment has greatly improved; data within their billing system can now be viewed through ArcGIS; and field crews and office staff have mobile applications that allow them to interact with data including an Isolation Trace app, Fire Hydrant Inspection app, infrastructure app, Map Change Request app, and a Main Break & Leak Response app.

As much as the utility gained by delivering data to users and configuring workflows by wiring together a series of apps, Oxford Water also recognized the need for more structured, holistic asset management. GISinc helped strategize on different approaches and implementation patterns and ultimately Cityworks was identified as the right solution.

The implementation is largely a standard configuration of Cityworks Asset Management System, leveraging a combination of identified Service Requests, Work Orders, and Inspections. The City was also using CUSI for utility billing, however, which had a legacy feature to track service orders. also using CUSI for utility billing, which had a legacy feature to track service orders. Rather than having two systems track similar or redundant data, GISinc and Oxford Water determined that an integration that transferred this function between the systems would produce the most seamless user experience. GISinc then worked directly with CUSI to establish the mechanics of the integration, which were largely focused on transitioning a user working within CUSI over to a middleware interface during certain trigger events. Leveraging this approach, Oxford Water could retain their billing system and not have to re-train staff, yet the information was tracked to a singular system.