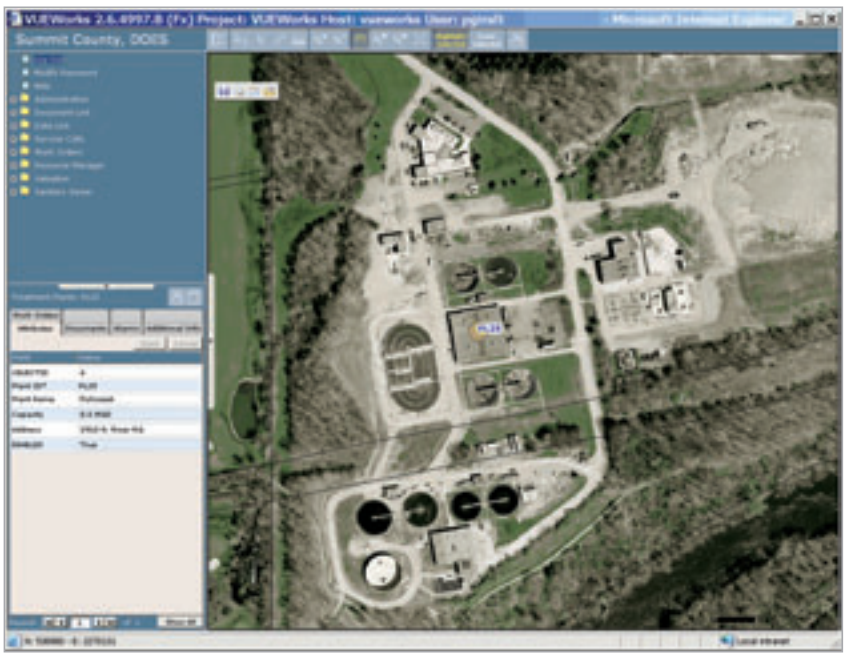
Maximizing the POWER of GIS

An Ohio public service agency centralizes its data using a GIS-integrated asset management system

By Becky Stevens

Situated at the highest point along the Erie-Ohio Canal, Summit County, Ohio, covers 412.8 sq miles and includes various cities, including Akron. Summit County's Department of Public Service (DPS) owns, operates and maintains 870 miles of sewer lines; 17,500 manholes; 200 pump station and grinder pumps; and 10 wastewater treatment plants.

The DPS has three operating divisions—Administration, Engineering and Operations—each of which has its own distinct function, employs its own work force and operates with its own county council-approved budget. The DPS prepares the sewer bills and collects the user fees and charges for deposit into the county treasury. The funds managed by the department are enterprise funds and are not dependent on the county's general operating funds.



Summit County's Fishcreek Wastewater Treatment Plant inside VUEWorks

Scattered Information

As in many municipalities, knowledge about DPS physical assets had accumulated in many different databases, formats and applications over the years. The DPS had more than 50 unique, homegrown databases being utilized for work order, asset management and billing applications. Compounding the problem, the IT applications and databases were physically dispersed across the three operating divisions and locations. This situation made it difficult for the department to implement a coordinated maintenance plan, assess the correct user fees to cover the cost of maintenance and ensure that it was complying with GASB 34 reporting.

At the time, all of the assets were mapped in a GIS system as ESRI ArcGIS shapefiles. Being in the wastewater industry, the agency realized the importance of the spatial component of its physical assets database. It became apparent that GIS should be taken to the operational level by using it as a tool for data integration, but the agency had not been using the full potential of GIS beyond mapping and inventory. Further, the IT department did not have the GIS expertise to create an application that would integrate the multiple databases with GIS.

The Integration Process

In 2005, the DPS began investigating solutions for work order and asset management that integrated seamlessly with GIS and would also integrate data and application silos onto a common platform. The agency researched a number of GIS-based asset management solutions and evaluated the products based on user interface; ease of use; customization; database architecture; querying and reporting features; Web services; open-office compatibility; data linking to other databases; and affordability. The DPS ultimately selected VUEWorks from VUEWorks Inc.

"VUEWorks centralized access to all of our physical asset information on a common platform that was easy to use and readily accessible to staff across our three operating divisions," said Pat Giralt, a database administrator for Summit County DPS. "It provided the capabilities we needed and supported both the shapefile format and the SDE Geodatabase format, which has allowed the county to add more intelligence to its GIS system."

The DPS incorporated or replaced 11 of its databases with VUEWorks. Once the DPS centralized the data about its physical assets, it was able to centralize its maintenance activities. Centralizing the data made it possible to

eliminate issuing hard copies of work orders; supervisors are now notified electronically when a work order is issued. Viewing maps and engineering drawings is also faster, as all information is available in the new program.

Lessons Learned

1) ***Implementing an asset management solution in phases ensures a smooth transition.*** The DPS implemented its new solution in several phases, beginning with the Sewer Maintenance Department. Once that was working, the Plants and Pump Station Department was incorporated, then the Engineering Department.

"Since we had a work-order system that we had developed in house prior to VUEWorks, the transition was not that difficult for our employees," Giralt said. "We held several training sessions for different groups and also provided one-on-one training if necessary."

2) ***A well-managed GIS geodatabase should be the core of your information system.*** "It is important to consider data as an asset as well; data is useless unless it gives us useful information," Giralt said. "The best place to manage our data is through the GIS geodatabase, so this should be properly designed and maintained to make sure data is secure, accurate and can be easily accessed when needed, not only internally but also externally."

Bottom Line

"The DPS of Summit County has been able to extend the usability of its GIS data beyond mapping and inventory by using it as a base for integrating data across our organization," said Giralt. "With VUEWorks, we now use the GIS for maintenance, monitoring and management of our assets. In this regard, we are getting a better return of our investment in GIS."

The agency's new comprehensive and structured long-term asset management approach has also resulted in, according to Giralt, better identification and management of infrastructure needs; improved regulatory compliance; improved financial reporting; better collection system reliability and cost savings. SWS

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