Tying it All Together

By Ryan Haughton

A Georgia water and sewer utility increases its productivity using asset inspection and decision support software

Henry County Water & Sewerage Authority (HCWSA) meets the needs of Henry County, Ga., citizens by maintaining an effective sewer system, providing clean sources of water and protecting watersheds while meeting all federal and state requirements. HCWSA serves 20,000 sewer customers with approximately 422 miles of sanitary sewer lines and 32 wastewater lift stations. There are four wastewater treatment facilities in the system, totaling an annual average daily treatment of 4.86 million gal per day (mgd) and a treatment capacity of 7.75 mgd.

HCWSA first adopted Granite XP in 2007. In 2009, the authority made improvements, including the deployment of new field laptops.

Inspecting these sanitary components is a critical step in ensuring continued and efficient system operation. Since June 2007, the county has been utilizing Granite XP asset inspection and decision support software to collect and analyze mainline, manhole and lateral inspection data. Also purchased in June was the optional ESRI module enabling integration between Granite and HCWSA GIS data. Asset attributes (e.g., IDs, dimensions, materials, etc.) were imported from GIS to the Granite XP field database on a CCTV van as part of the software implementation process.

Management saw an immediate increase in productivity; some of what was being entered by hand and subject to human error could now be imported directly from a quality-controlled central data source. Additionally, the new process takes less time because inspection crew members can select assets for inspection creation or review by clicking on a map.

From Good to Great

By all accounts, it was a successful, time-saving, value-adding system implementation. Fast forward two years to June 2009, with the country's economy experiencing contraction in all sectors, forcing budget cuts and downsizing and mandating higher operating efficiency with fewer resources. Henry County decided to examine its overall maintenance activities and processes to identify possible opportunities to improve efficiency.

Jim Brinkman, sewer maintenance crew leader, had been in contact with representatives from CUES and proposed that perhaps Granite XP could be re-implemented and retrained to more fully leverage the technology and maximize resulting benefits. Current Granite utilization and GIS integration were to be evaluated, as were the entire inspection and maintenance process flows.

Planning Makes Perfect

Brinkman and the CUES Software Div. began scoping a software implementation project that would achieve several important goals. At the top of the list was complete integration; if activity tracking of a particular type was not being done in Granite, it should be. The deployment of new field laptops and key enhancements to the overall flexibility of the software would allow tracking of cleaning (jetting), repair and area grounds maintenance in addition to asset inspection data collection.

With its newly integrated system, HCWSA can track all maintenance-related information in one place and schedule future inspections and repairs accordingly.

Also included in the scope was database platform migration from a single-user Microsoft Access format to the enterprise-level MS SQL Server environment. This conversion would provide greater scalability and the ability to distribute data to many users simultaneously. GIS integration would be revisited to include the import of additional useful data to the field and export of recorded information back to ArcGIS, where it could be displayed on the map and used to make business decisions.

The finer details and re-engineered processes were discussed thoroughly and documented in an advanced implementation document over a series of several Web meetings. By the third week of July 2009, most of the technical tasks had been completed, and as previously agreed on, the final stages of the implementation and training would be completed on site by a CUES representative from July 27 to 31.

Reaping the Benefits

The final week went smoothly, and all tasks were completed successfully. It was only months later, however, after HCWSA had been using the new software and processes, that the benefits could be appreciated and measured fully.

Because repairs, grounds maintenance, cleaning and inspections are all tracked in the same system, decisions can be made for one activity based on data from another. For example, CCTV inspections typically are performed once a line has been cleaned. Cleaned lines can be color-coded on the map to indicate where the next phase of inspections should occur. Any such dependant tasks can be scheduled based on completion of associated projects.

Administrative Coordinator Vicki Mott commented on some of the benefits of the project: "Repairs can now be scheduled out based on severity. Based on observations made by the jet crew and CCTV crew, repair crews can view problems and have materials needed before going to the work site, improving time management. Also, when a problem is found and corrected and/or repaired, we are able to create another inspection that shows the problem resolved—all in the same project. Before, all cutting and clearing was stored on a map and highlighted with a marker. Now the crew can map out areas that have been cut, and our monthly reporting is complete and accurate. Granite XP allows us to better plan for any capital improvement projects or any rehab that needs to be planned and scheduled." SWS

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