



Turning Asset Data Into Information

By David Lewis

Asset data involving water valves and hydrants are often difficult to access, difficult to maintain and difficult to distribute. Historically, asset data has been kept on index cards. But cards cannot be queried, sorted, assigned values, trended or updated. When updates are needed, information must be scribed legibly using a system of language that may not be easily understood or translated. This manual effort is time consuming and creates an environment for human error. While the use and application of Microsoft Access and Excel flat table storage systems have added some functionality, these applications are not expressly designed for asset management and analysis.

Today, utilities have a greater need than ever to capture and use asset data in order to understand operating characteristics of valve assets. Older water systems soon will undergo widespread pipeline replacements. The challenge faced until replacement begins is providing sustainable and high quality water services to customers. At the center of this challenge is the aging water delivery system including pipe, valves and hydrants. Customer demand will remain at current levels at the minimum, which places pressure on the aging system. If customer demand increases, however, pressure on the system will rise to untested levels. The result: Water main breaks, water quality issues and subsequent asset failures.

How can managers continue to provide high quality water services to customers while preparing for and implementing needed repairs and updates to the distribution system? One approach is deploying Computerized Maintenance

Management Systems, or CMMS. These systems allow users to integrate asset, inspection and work order databases with Geographic Information Systems (GIS).

The provisioning mechanisms for the operations and maintenance department are created by using CMMS and GIS. Work orders are connected to asset and inspection tables. The orders are then published with all required operability characteristics. Since accurate and timely information is at the disposal of decision makers, these characteristics minimize if not eliminate risk of failure. Through the use of GIS, asset data is linked with earth coordinates, meaning real-time accuracy. Operators then have at their disposal detailed asset data, pinpointing exactly where the asset is and its condition and history.

This type of operating environment requires change at many levels, including operations and maintenance. This change, however, yields a more productive environment and improved customer satisfaction. Work flows will be streamlined, analysis will be faster and more accurate, changes in customer demand can be met promptly and all assets can be accounted for and managed efficiently. This change is necessary and its success can be measured in responsiveness, the number of water main breaks, water quality levels and overall customer satisfaction.

Turning data into information and then managing that information is required now. As a result, water distribution systems, through the proper use of CMMS and GIS, will be more responsive and profitable.