

Water System Master Plan & GIS Implementation Belton, Missouri

City of Belton, Missouri

This project involved the development of a Water Master Plan for the City of Belton, Missouri which contains over 7,000 water meters and 800 miles of water mains. The Master Plan included preparing population and land use projections for the 20-year planning period. A water system GIS layer was developed for the City which allows them to more easily review and respond to inquiries, and update the current system on-line. A hydraulic model of the water distribution system, which included two water towers, one storage tank, and two pumping stations, was created and current and future water demand was modeled to determine the needed improvements to the system. The project team assisted the City in the selection of the hydraulic modeling software by conducting a services and cost comparison memorandum, and through on-site demonstrations of the various software programs.

Based upon the results of the modeling, a 20 year Capital Improvements Plan was developed. It included projects on a priority basis for general water system needs, future pumping station rehabilitation and expansions, new storage facilities (tanks), and water line and mains requirements for renewal and growth. The project also included the purchase and implementation of a CMMS for the water system.



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