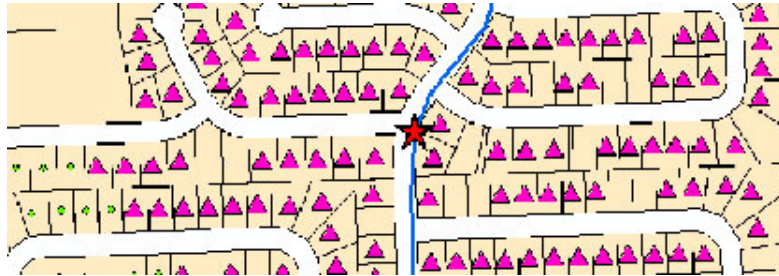


## Water Distribution Master Plan

**Location:** Wichita, Kan.

**Client:** City of Wichita

**Completion Date:** 2005



### PROJECT SUMMARY

The City of Wichita, Kan., selected Burns & McDonnell to perform a water distribution system master plan. Burns & McDonnell developed a 20-year master plan with strong ties to an ESRI geodatabase foundation.

Burns & McDonnell utilized the existing information management foundation within the city to develop a fully geographic information system (GIS) integrated water distribution master plan. A combination of an AutoCAD distribution system mapping and a Microsoft SQL Server 2000 geodatabase GIS was used to develop the master plan. The AutoCAD distribution system mapping was converted into SQL geodatabase and integrated into the existing city GIS system.

The MWH Soft model H2O-Net was selected to perform the predictive modeling for the master planning effort. The model is linked directly to the SQL geodatabase of the distribution system. Additionally, the city's customer information system was geocoded to the parcel base in the GIS. Once the customers were geographically located, the entire database of water usage data was linked to the closest water distribution system node, yielding an accurate distribution of the current system demands.

The master planning effort not only provided a look into the future of the water distribution system for the city, it also resulted in the conversion and integration of the water distribution network into the city's legacy GIS and the geographic placement of the city's customer database. The master plan is a tool by which the city can regularly assess the water system performance because of the dynamic ties to the citywide GIS and information management initiatives.

### SERVICES PROVIDED

- Database design
- Database management
- Data conversion
- Spatial analysis
- Map production
- Modeling support

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