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Avineon, Inc.



City of Tucson, AZ

Water Department Facilities Conversion



Scope:

- 1600 Valve Maps
- 300 square mile area in Pima County, Arizona
- 4,200 miles of mains
- 190,000 services
- 635,000 customers

Project Duration:

July 2002 - May 2004



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Avineon was selected by the City of Tucson Water Department to convert potable and non-potable water infrastructure data located on existing paper-based maps (Valve Maps) into an ArcGIS SDE Geodatabase.

Tucson Water (TW) is building an enterprise GIS that will improve management of its largest asset, the water system infrastructure. A major component and the foundation for the GIS is the conversion of the hardcopy Valve Maps to a digital format to create a seamless data set. This project will compile existing mapping resources into a single continuous network database that will allow the Water Department to better manage, plan, and model its water system and resources. The completed GIS will be tightly integrated with the Maintenance Management System (MMS), another concurrent technological initiative that will contain most of the physical asset information for TW. Tucson's primary sections involved in the GIS Valve Map Conversion Project are Mapping/GIS, Information Services, and System Planning and Development.

The City selected Avineon to convert the potable and non-potable water network as depicted on the existing valve maps to the ArcGIS SDE Geodatabase, consistent with the City-provided Geodatabase design model. A critical phase of conversion includes the process of appending deliveries within the Geodatabase environment to allow previously accepted deliveries to be loaded into TW's ongoing production maintenance Geodatabase.

The water system facilities and associated attributes are being captured by Avineon according to the water system Conversion Matrix and Annotation Matrix provided by the City and the TW Valve Map Conversion Specifications created by Avineon. The City provides the digital landbase coverages to which the water network is geo-referenced.

Another critical factor is the security control measures employed by Avineon to secure the source maps and the integrity of completed deliverables to comply with water system security considerations. Avineon is utilizing an 'isolated' team working domestically in the United States to provide the required security measures.

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