Using ArcGIS Server to Support Sanitary and Stormwater Operations

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MCO – Midwest Contract Operations

- Contract Operations Firm
- Industrial and Municipal Clients
  - Water treatment
  - Wastewater treatment
  - Public works facilities
Project Need

- Numerous distribution networks operated by various staff
  - Each community managed data/information differently
- New Staff Additions
  - Staff unfamiliar with distribution systems
- Diggers Locates
- Ability to view and manage basic asset information
  - Current mapping not utilized frequently due to inaccuracies and lack of data updates
- Centralized location for managing asset information
Field Data Collection

- Trimble GeoXH
- Pathfinder Office
  - Data Dictionary
  - Basic attribute information collected as well as locations
- Zephyr Antennae
- VRS Real-Time Corrections
- Collection performed by MCO operators most familiar with utility systems
Field Data Collection

- **Sanitary Sewer Systems**
  - Manholes

- **Water System**
  - Hydrants, Valves,
  - Curb-stops

- **Storm Water System**
  - Manholes, Culverts
Compilation of field data collection and existing mapping (if available)

- AutoCad Mapping
- Hardcopy Mapping
- Televising Reports
- Record Drawings
- Hand Drawn Maps
Technology
Data

Data Stored in single SDE and SQL Server 2008

- Each Municipality stored as Feature Data Sets
- Assets stored as Feature Classes
- Schema consistent across municipalities
Web Mapping

- Flex API 2.3
- ArcGIS Server 10
- Geo Data Services for connecting to SDE
- EditorTask Control used for web editing
Security

- User/Group Based Permissions
  - Editing
  - Access

- Login system utilizes Model View Controller 3 (MVC3)
  - Direct connections to SQL permission Tables
Configuration Challenge

- Multiple Groups, Roles, User within a single application
  - Setup multiple configuration files
  - Login credentials determine configuration files

- Configuration files determine:
  - Map Extent
  - Map Services (layers)
  - Editing Permissions
  - Layout/UI
ArcGIS Server Application

- Live Demo
- MCO GIS Web Application Log-in
Thank You For Your Time

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