CMWD Leverages ArcGIS Server for Treatment Plant Maintenance Management System

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Agenda

• Calleguas MWD Overview
• Business Challenges & Project Drivers
• Project Overview & Objectives
  • Technology Environment
  • Maintenance Planning & Scheduling
  • Work Management
  • Document Management
  • Web GIS

• Project Benefits
Calleguas Municipal Water District

“...To provide its service area with a reliable and adequate supply of quality supplemental water through the acquisition and distribution of both regionally and locally-developed water in an environmentally and economically responsible manner.”

District Overview

- Located in Ventura County, California
- Member of MWD of Southern California since 1960
- Wholesale water provider to 22 purveyors
- 60+ Employees (including field personnel)
Calleguas Municipal Water District

Calleguas is the 4th largest wholesale water utility in Southern California

Key Statistics

- 350+ Sq Mi Service Area
- Serving ~600,000 People
- 130+ Miles of large pipelines
- Annual deliveries of 115,000 acre feet
Business Challenges & Drivers

- Continuous growth in the region = Increase in water supply needs
- Aging existing facilities = replacement program
- New infrastructure + aging facilities = additional O&M
- Board challenge = Control costs (labor, energy, water, purchases)
- Management need = Track O&M costs by facility (O&M of co-funded facilities gets 50% reimbursement from MWD)

SOLUTION: Implement IT solution to enable improved efficiency, O&M activity, asset tracking and capital cost recovery
Project Vision

Develop and integrate key IT Systems to support core business operations

- Field Automation System
- Management Reporting
- Financial Management System
- Time & Activity Tracking System
- Document Management System
- Geographic Information System
- Asset Management & Scheduling
- Data
Overview & Objectives

Web GIS and Work Management Integration Project

Objectives:

– Implement Integrated GIS and work management system to streamline capital cost recovery, enable improved efficiency and enhance customer service

– Develop a central asset management and GIS mapping database

– Convert paper Plansheet maps and records to digital format

– Enable accurate tracking of O&M activities

– Implement planned maintenance scheduling for O&M

– Automate MWD cost reimbursement tracking and invoicing
Maintenance Planning & Scheduling

- Provide functionality to automatically generate and schedule preventative or predictive work orders
- Accurately balance resources and minimize costs
O&M Work Orders

- O&M Work Orders provide core work management functionality for TATS
  - Create and assign work orders to field crew
  - Provide management with functionality to track status and effort of assigned work
O&M Work Logs

- Capture information relating to resources (time, equipment, etc.) utilized on work performed in the field

- Provide management with quick access to information critical for decision making
Document Management

- Upload documents and/or images and link them to Facilities and Assets.

- Provide tools to search for and update documents.
Web-GIS Application

- Uses ESRI ArcGIS Server 9.3 technology

- Provide quick and easy access to GIS data for all user groups (both technical and non-technical)

- Web-GIS features include: basic and advanced navigation, access to facility physical attributes, integration with TATS, and access to water system drawings (As-Builts).
Web-GIS Identify Tool
Web-GIS Search Tools
Web-GIS Bookmark Tool
Web-GIS Documents
Web-GIS O&M Work Activities
Web-GIS Google Tool
Project Benefits

- Supports District’s succession planning goals by capturing employee and institutional knowledge

- **GIS supports District programs and public communication** (GIS data and maps used for Callequas Creek Watershed, Development Capital Construction Charges, Communicating with Public on Potential Impacts of Development)

- Through the effort of converting paper Plansheet maps and Right Of Way Deeds to digital format, the District was able to integrate them into the GIS

- **Delivers efficiency and cost savings through timesheet and O&M work automation** (Automating work of 4-5 FTE’s)

- Enables timely, accurate cost tracking and reimbursement

- **Provides a single database for tracking and managing all District assets, resources, and work activities** (Establishes District’s foundation for Asset Management)
Thank you for your time!

Questions?

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