YLWD Background & SCADAWatch
Goals and Objectives

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Parties Involved

Yorba Linda Water District (YLWD)

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Outline

• Background
• Project Goals
• Data Sources/Hurdles
• Software Utilization
• Moving Forward
YLWD Background

• Formed as YLWD in 1959 by Customer Vote
• Major Facilities Inventory (approximate)
  • 25,000 Potable Connections
  • 20 Major and Sub-Pressure Zones
  • 11 Active Wells (some with gas engines)
  • 14 Reservoirs (all buried below ground)
  • 360 Miles of Potable Water Main
District Facilities:
- 11 Wells
- 14 Reservoirs
- 12 Booster Pump Stations
- 4 MET Connections

Overall Facilities

Yorba Linda Water District

YLWD SYSTEM ID#: 3010037
MAX STORAGE CAP: 57.5 MG
YLWD SCADAWatch Goals

- Assist with In-House Model Calibration
- Easy Access to Historical & Live Data
- Assist with Water Audits & Leak Detection
- Assist with Water Quality Analysis
- Manage and Track Pumping Costs
- Optimize Operational Efficiencies
- Additional Field Operator SCADA Monitoring
Data Sources

• SCADA data (Wonderware)
• InfoWater Model
  – GIS Based
Hurdles

• Buy-In from Other Departments
• Historian/Security Issues
• Defining Increments (15-Minutes)
• New SCADA Data Additions
Software Utilization

SCADAWatch

- Search
- Modify
- Report
- Dashboard
- Act
- Display
- Track
- Export

Esri Partner Conference 2015 Award Winner
ArcGIS for Desktop Based Application
Software Utilization

Leveraging the power of Esri ArcGIS online and SQL Server databases

Real-time SCADA data (including historical, trending, and analytics) and continuously up-to-date hydraulic, water quality, and energy model results always available, at your fingertips, on any computer or smart device.
Software Utilization

• Dashboards
• Searches/Queries/Tracking
• Analytics
• Mass Balance
• Hydraulic Model Integration
Software Utilization

Dashboards
Software Utilization
Alerts

• How often a sensor is out of commission (no signal) or jammed (stuck at one value)?
• When did a sensor exceed or fall below specified values?
• When did the rate of change (ROC) of a tank level or volume exceed a specified value?
• Temporary alerts (ex. specific projects)
Software Utilization

HH Pump Curve Jan

Hidden Hills Station Discharge Pressure (Head (ft))

Hidden Hills Station Flow (Flow (gpm))

2016-01-01 00:00:00 - 2016-01-31 00:00:00
Software Utilization

Mass Balance
Software Utilization

Reporting

- Non-revenue water
- Conservation
- Water quality
- Well utilization
- Consent decree compliance
- Shift summary/operations
- Production
Software Utilization
Hydraulic Model Connection

- Diurnal Pattern Generation
- Calibration Graphs
- Calibration Statistics
- Live Modeling with Auto-Updates
- Instant Validation
- Forensic Modeling
Questions?