OPTIMIZED PREVENTATIVE MAINTENANCE WITH ARCGIS SERVER AT SACRAMENTO
Introductions

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Department of Utilities

- Population: 480,000

- 4 Maintenance Groups
  - Water
  - Wastewater
  - Storm water
  - Water conservation
Session Agenda

- Use of GIS at DOU
- CMMS Integration
- Geographic Scheduling Solution
- Takeaways
- Questions and Answers
GIS @ DOU

- Managed by City I.T.
- Team of 2 techs dedicated to DOU
- Relied upon for daily operations
- Multiple integrated data systems
GIS + CMMS = 😊

“Computerized Maintenance Management System”

- ~200 Users: Office + Field
  - Water
  - Wastewater
  - Drainage
  - Water Conservation
  - Engineering
  - Administration
  - Others...
Cityworks AMS

- GIS-Centric
  - GIS = Asset Inventory
  - Uses Map Services

- 2013 DOU Upgrade
  - Desktop to Server
System Architecture—Physical

(1) EWGISAP04
ArcGIS Server 10.1, SP1

(2) EWGISAP05
ArcGIS Server 10.1, SP1

(3) DOUCWAMS01
Cityworks AMS 2013 + Web Adapter

(4) DOUCWAMS02
Cityworks AMS 2013 + Web Adapter

(5) DOUAPP05
Existing Cityworks 4.5 DB
SQL Server 2005
New: Will be upgraded to SQL Server 2012

(6) DOUCW2012DB
- TEMPORARY -
Cityworks 2013 DB
SQL Server 2012

(7) ELSDEPUB02
SDE 10.2 Publication
Oracle 11g

(8) ELSDETRNO2
SDE 10.2 Transaction
Oracle 11g

(9) DOUAPP02, 06, 07
Existing RDS Servers
Cityworks Anywhere
New: Browser

(10) DOUCWAUX01
Auxiliary Software

(11) Mobile Users
RemoteApp - Browser

(12) Office Users
Browser
System Architecture—Logical

GIS

Nightly Update

Map Server

CL

Cityworks Server

CMMS

CMMS Users

Cityworks Anywhere
Geographic Scheduling

of Preventative Maintenance Activities
The Problem

- Most CMMS systems can “do cyclical scheduling”
- But what about logistics?
  - Geographic grouping
  - Multi-factor prioritization
  - Route optimization
The Solution

Geographic
(Map-Based)

Scheduling & Planning

From Inside Cityworks
Cityworks

SQL Server

Oracle

ArcSDE

IIS

ArcGIS Server

Silverlight

Map Browser

(not usually this complicated)
So What?

- Geography matters!
  - The “geographic perspective” to preventative maint.

- GIS integration
  - Tight GIS integration is required (at the vendor level even) for geo-enabling business systems

- Checks and balances
  - GIS as a safety net
Next Steps

- Cityworks 2014 Upgrade
- Continued Maintenance
- Trimble/Cityworks Interface
- Water Meter Maintenance Program
Next Steps: GIS Department

1. Upgrading all GIS platforms to ArcGIS 10.2.2 (Desktop and Server)
2. Consider upgrading GIS Platforms to 10.3 (depends on 3rd Party applications such as CityWorks, Infor EAM, Granite XP)
3. Expanding use of the Data Collector App and other ESRI apps on tablet devices
4. Evaluate use of high-end GPS receivers with Data Collector App and tablet devices
5. Publish Feature Services (view and editing) for use with the Data Collector App
6. Evolve Utilities, Public Works, and property related GIS layers to use Local Government Model and geometric networks
7. Utilize industry focused GIS data management tools and apps supported and promoted by ESRI
8. Deliver data, maps, and apps via web and web services to internal and public customers
9. Promote GIS within the City and maximize current investments in GIS while evaluating 3rd Party options
10. Promote data quality standards (GIS and other business system) throughout City departments
11. Expand the use of ArcSDE connections with internal CAD users in engineering departments
Questions & Answers
Contact Us

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