

Consolidating Real-Time Municipal Operations with Operations Dashboard

Eric Peña, GISP
IT Manager – GIS
City of Waco, TX



Some Context

- City of Waco, TX
- GIS Division established in IT August 2017 with GIS Manager and GIS Analyst now on staff
- Engineering was the de facto GIS Department for many years
- Outdated and legacy software used for Municipal Operations
- Ideal candidate for ArcGIS Enterprise and Operations Dashboard



Dated Work Management System

- HTE (Superion) Work Order software currently in use
- Dated interface and very limited GIS integration (i.e., nightly shapefile update)
- Emails and screen shots used for work notifications and service outages
- Follow up emails sent throughout the day
- Work history and details only stored in email threads



Obvious Problems

From: Public Works Director
Sent: Thursday, February 08, 2018 12:29 PM
To: Staff
Subject: RE: Street Closure

Good afternoon. Can anyone please provide me the number of full street closures we have had this year? This past 12 months too? Thx

From: Staff
Sent: Friday, February 09, 2018 8:52 AM
To: Public Works Director
Subject: RE: Street Closure

Fortunately I keep emails so I can answer this. I did an advanced search of emails with the criteria: subject contains road closed OR road closure Or street closure; and message doesn't contain "open" or "now open".

The search produced all road closed notices while eliminating the road is now open announcement. The results are not perfect but are very close. Here are the results:

What is the number of closures this year?

From January 1 through today there have been 59 notices of street or road closures, of these 10 were from public works and the remainder from utilities.

What is the number of closures in the last 12 months?

From February 1, 2017 through January 31, 2018 there were 335 notices of street or road closures, of these 65 were from public works and the remainder from utilities.



Sample Notification

From: Water RMG Staff

Sent: Tue 5/29/2018 3:26 PM

Subject: ROAD CLOSED

Email: Utility crews report that Melrose from Alford to Tennyson is closed due to emergency water main repair. The only home that will have a driveway blocked is 821 Melrose. Customer was not home to notify.



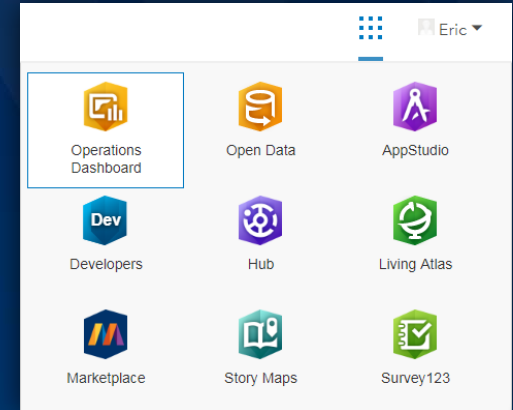
A Better Way

- Driven by city-wide Tyler Technologies ERP software implementation
 - EnerGov, Munis, and Enterprise Asset Management
- ArcGIS Enterprise 10.6 implementation
 - Portal, Server, Data Store + GeoEvent Server
- Must get full potential out of Enterprise Geodatabase (SQL)
- Significant city-wide investment has been made



Possible Solution

- Stumbled across Operations Dashboard on AGOL App Launcher (light bulb moment)
- Joined Early Adopter Community October 2017
- Learned ins and outs of software for next two months and began testing apps and processes



Sales Pitch

- Met with Water Utility Services management staff to demo proof of concept
- Discussed Water Utility Services' needs, work flow, and typical operations
- Received immediate positive feedback at this meeting
- Agreed to start a pilot project with RMG (Resource Management Group) Division for call center operations



Operation Categories

- Repair/Install
- Preventative Maintenance
- Traffic Control
- Service Interruption
- Contractor
- Additional data from legacy system

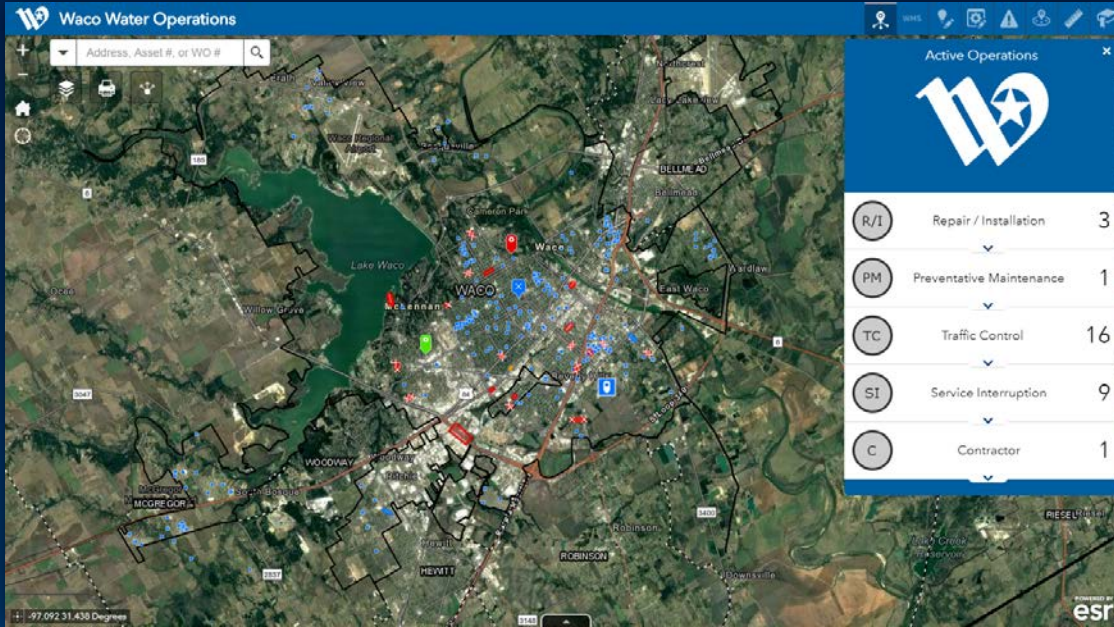


Getting Things Ready

- Determined to use ArcGIS Pro for all map image layer and feature service publishing
- Setup a on-site Base ArcGIS Enterprise deployment on test server using ArcGIS Enterprise Builder
- Separate install for Operations Dashboard for ArcGIS (v10.6)
- Used Integrated Windows Authentication



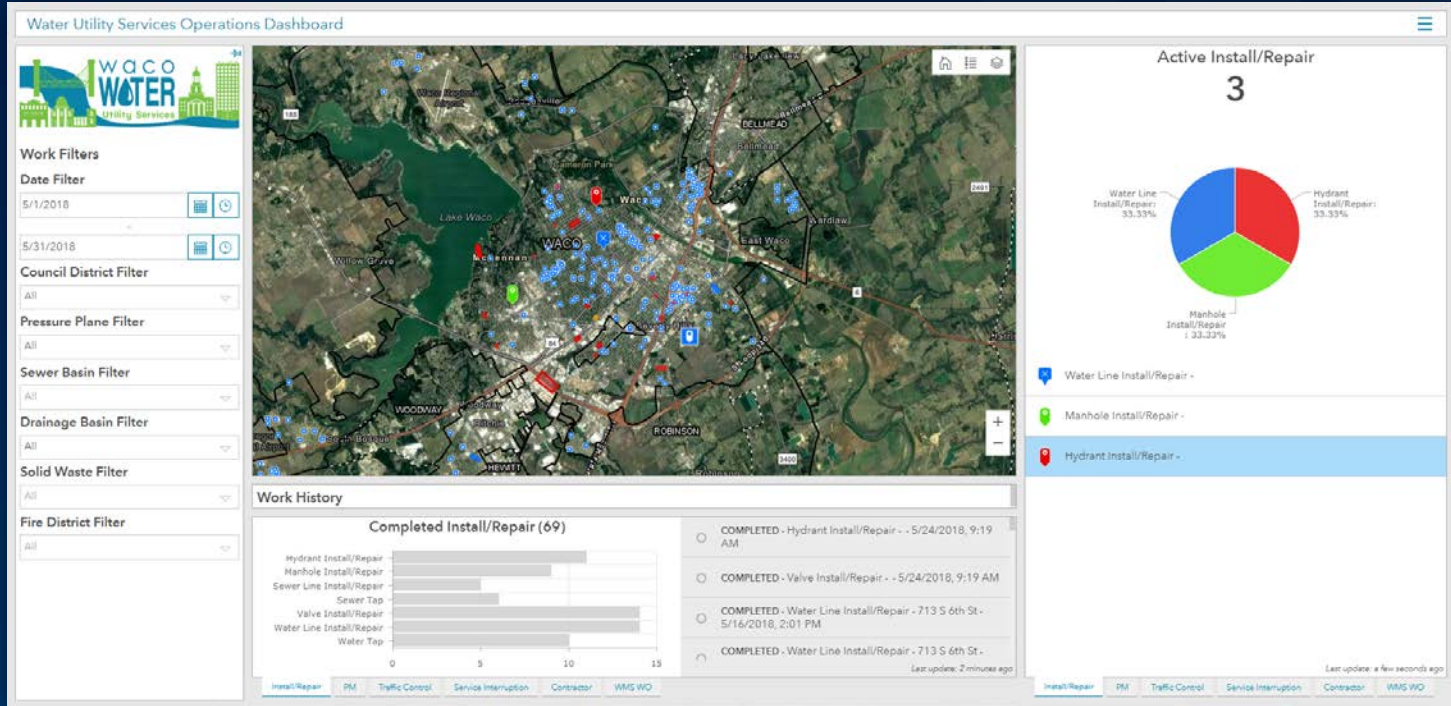
Water Operations Web Application



- Call Center web application
- Entry point for all utility operations
- Built using editable feature service
- Training provided to RMG Staff



Dashboard Demonstration



What's Been Done...

- Full ArcGIS Enterprise 10.6 deployment
 - SQL Enterprise Database
 - Portal with Operations Dashboard
 - Server
- Custom WebApps for Water Utility Services data entry and creation
- Water Utility Services have embraced Operations Dashboard for real-time operations management



Work Still To Be Done...

- Integrate Verizon NetworkFleet AVL feeds using GeoEvent Server
 - Real-time dispatch and coordination
 - Additional investment needed
 - Follow feature in Operations Dashboard?
- Integrate with Munis Enterprise Asset Management in the future
- Expand Operations Dashboard usage to other departments
 - City of Waco Development Projects Application



Thank You

