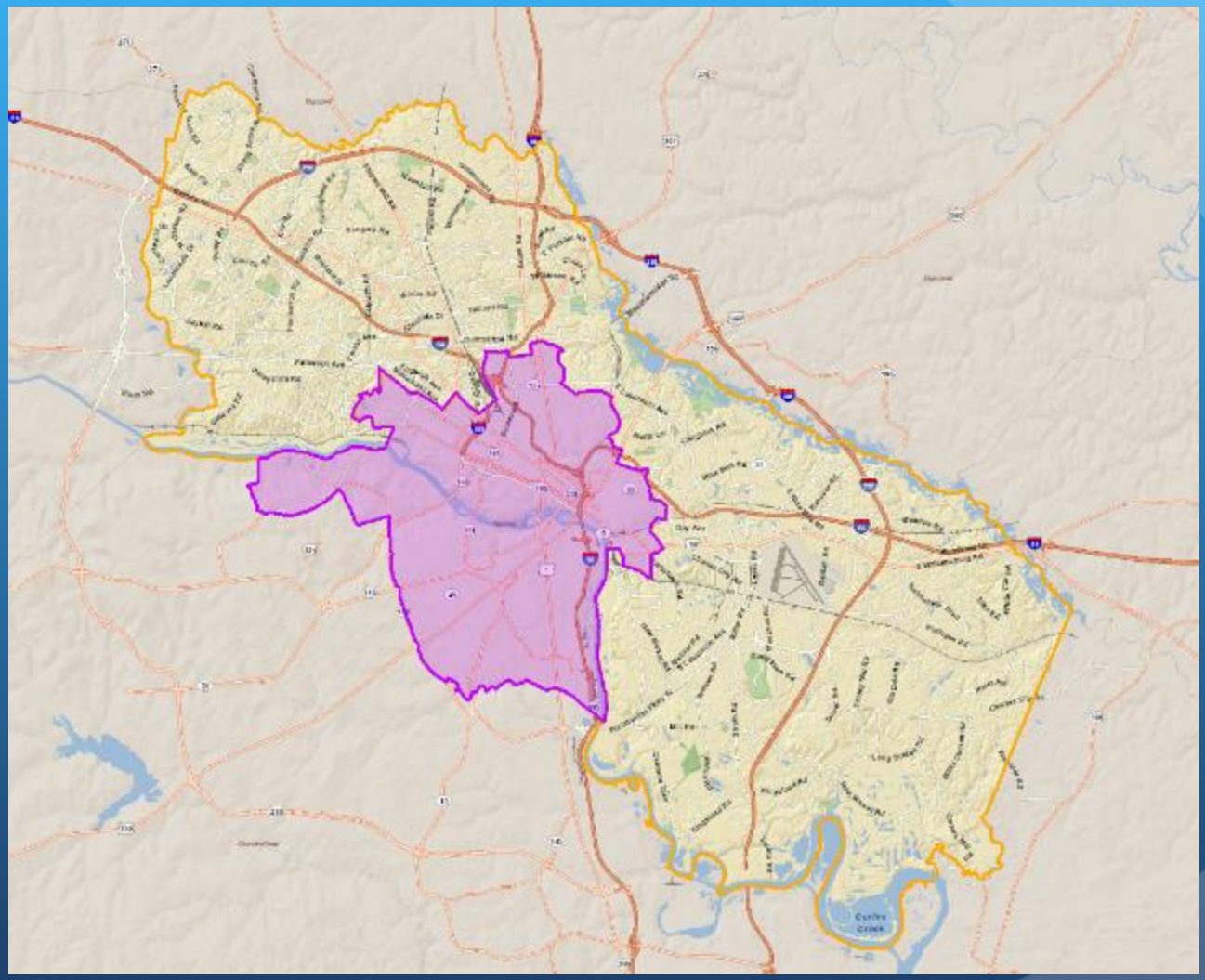
A Change Is Gonna Come

Continual Asset Management through GIS

Jeff Owen, GIS Manager
Henrico County Department of Public Utilities
Esri Water Conference
January 30, 2018

Henrico to San Diego

Henrico County

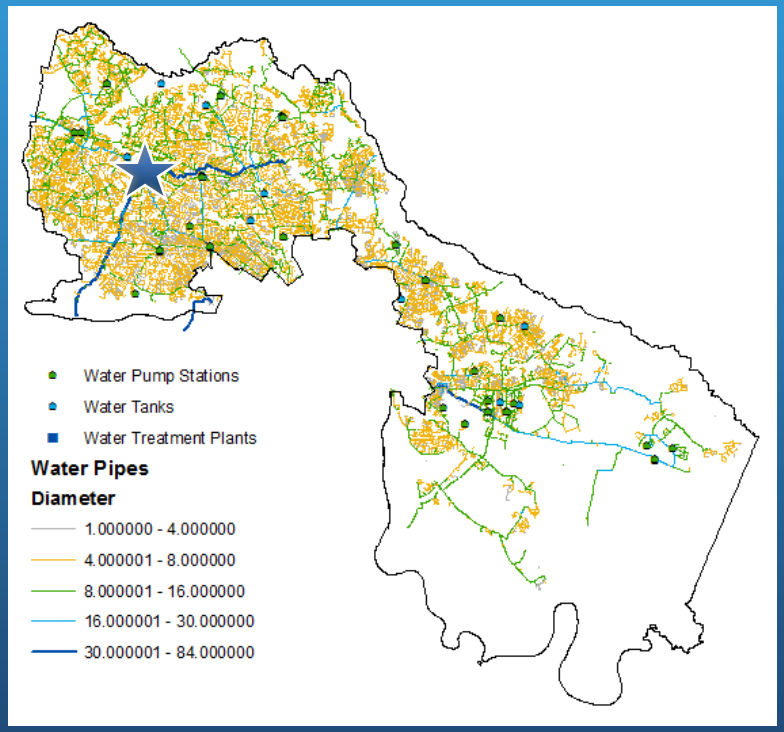


Department of Public Utilities

GIS

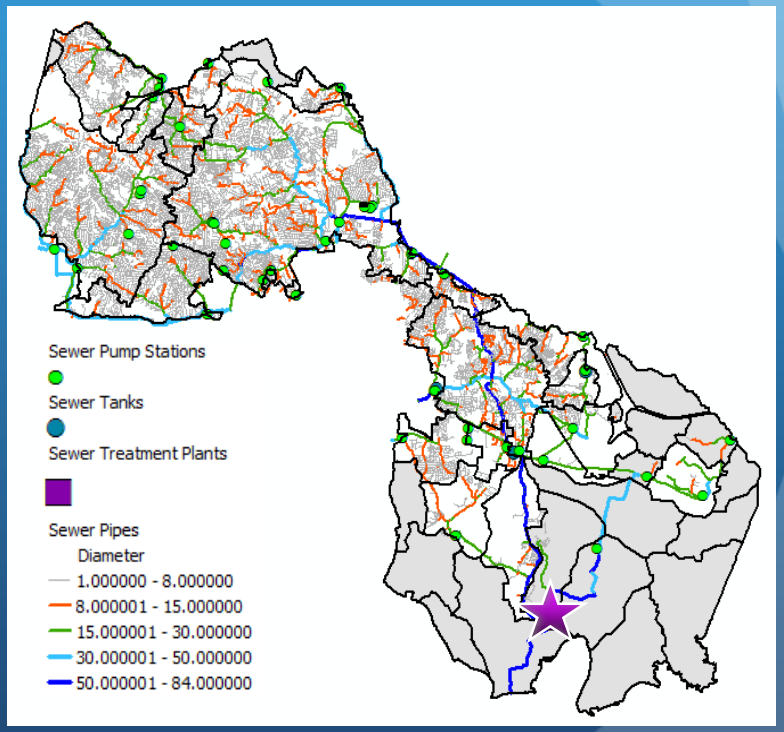
Water Distribution

(more than 1700 miles)



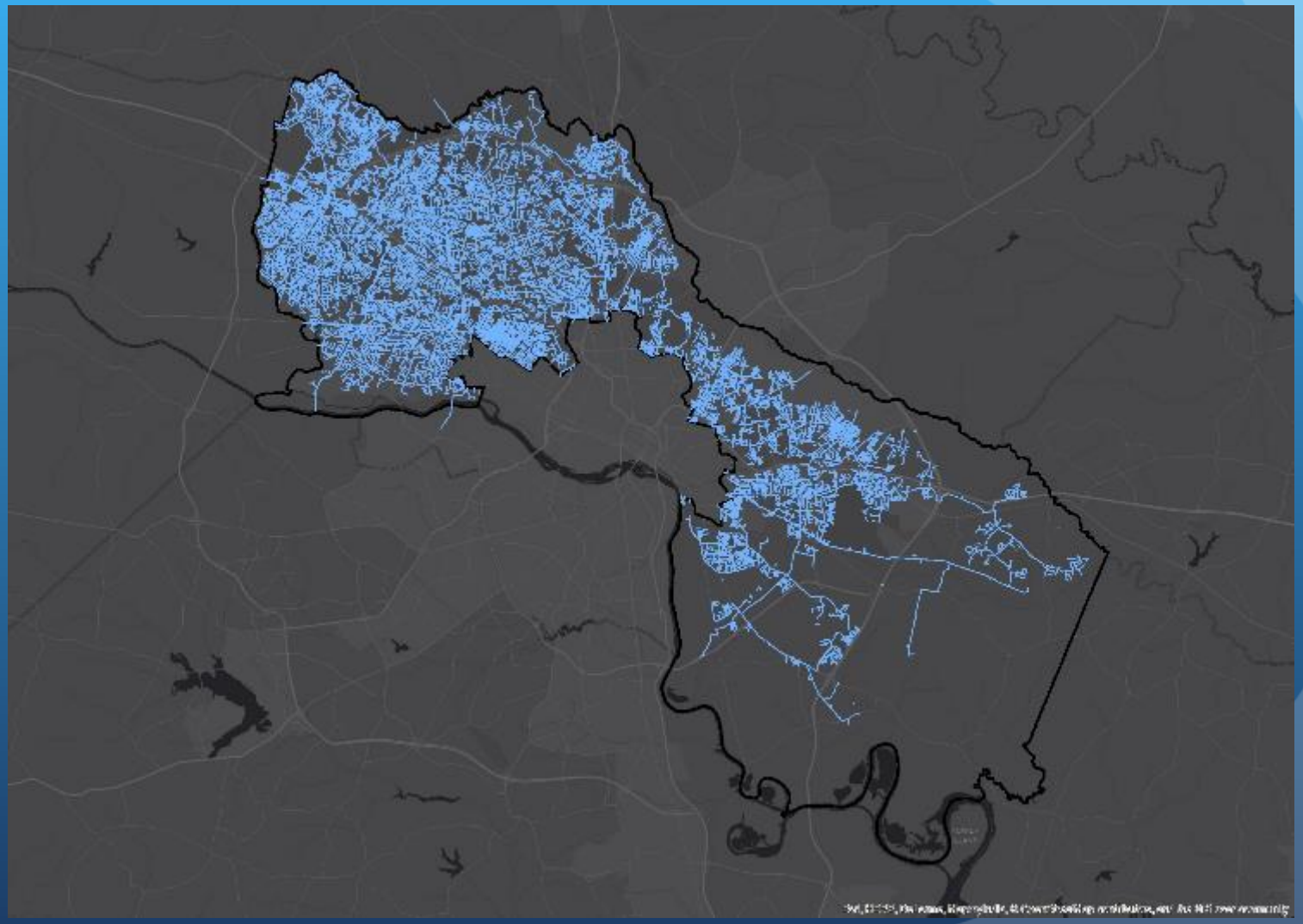
Wastewater Collection

(more than 1400 miles)

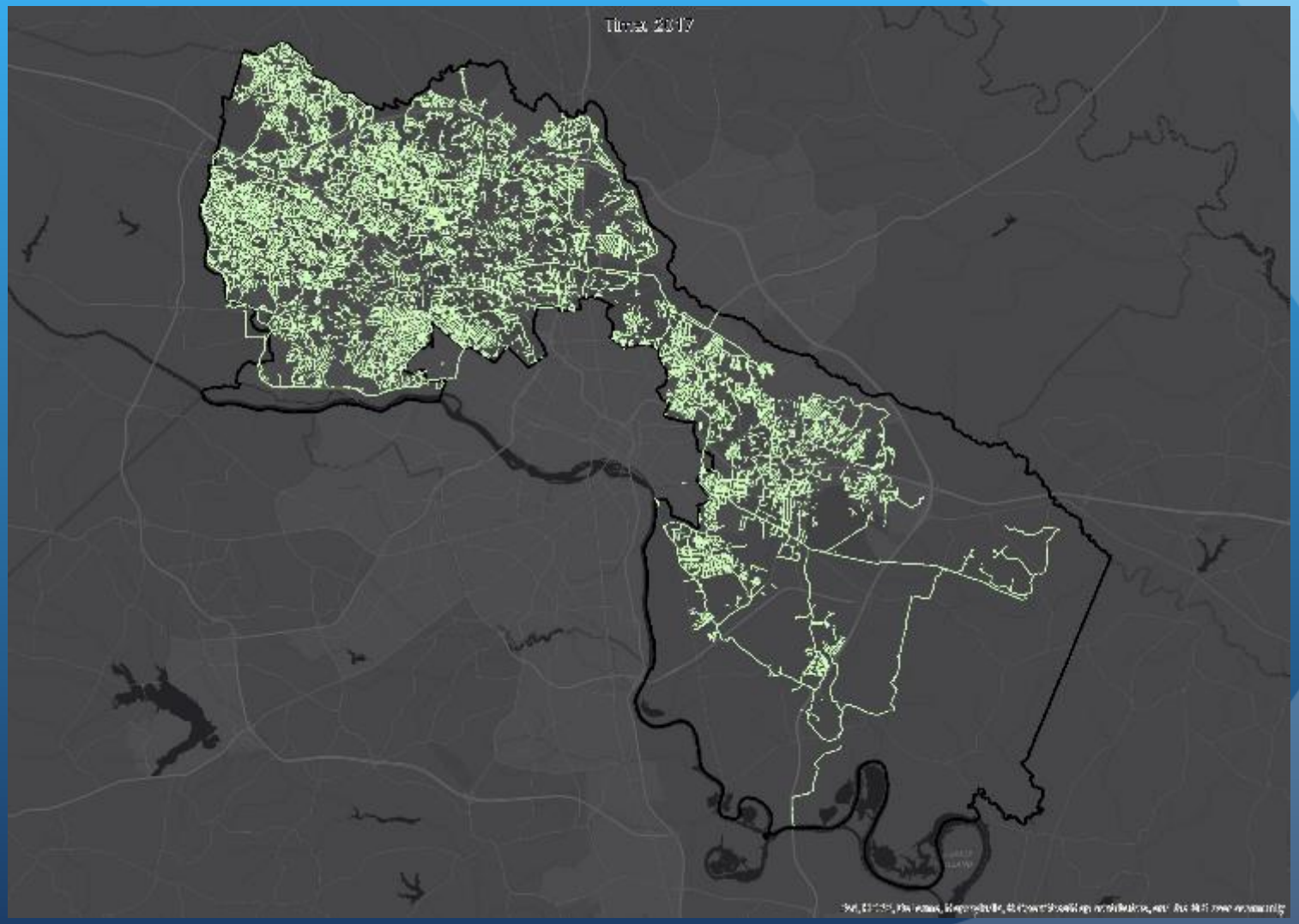


*Together these systems stretch longer than the distance from Henrico County to San Diego (as the extremely tired crow flies)

Build Out (1924 to Present)

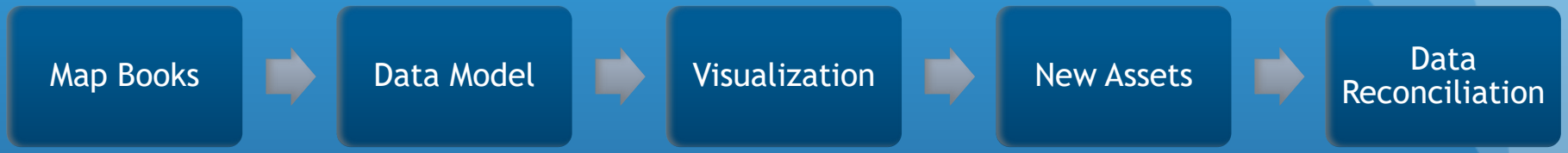


Build Out (1940 to Present)

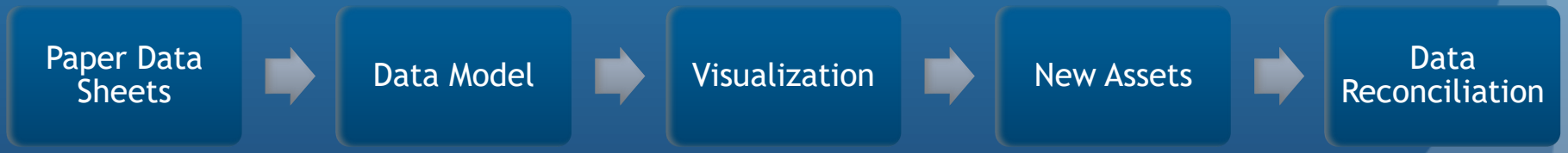


How Did We Get Started?

- Horizontal Assets

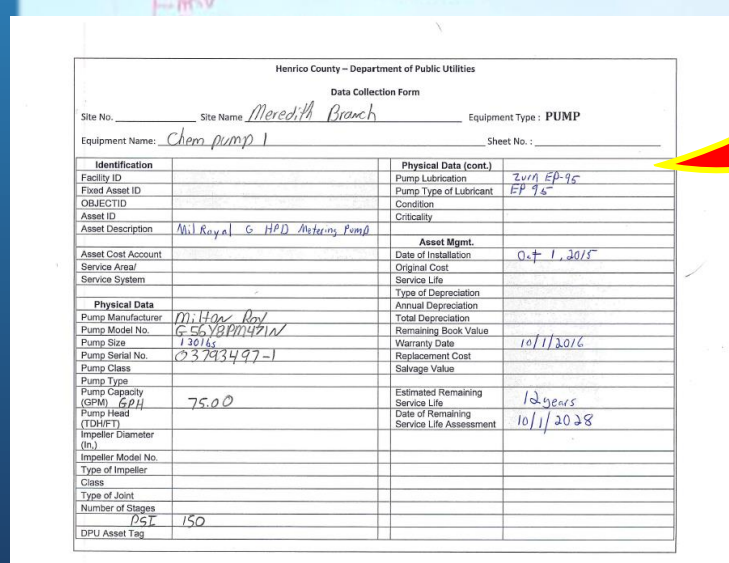


- Vertical Assets



Horizontal Assets

Vertical Assets



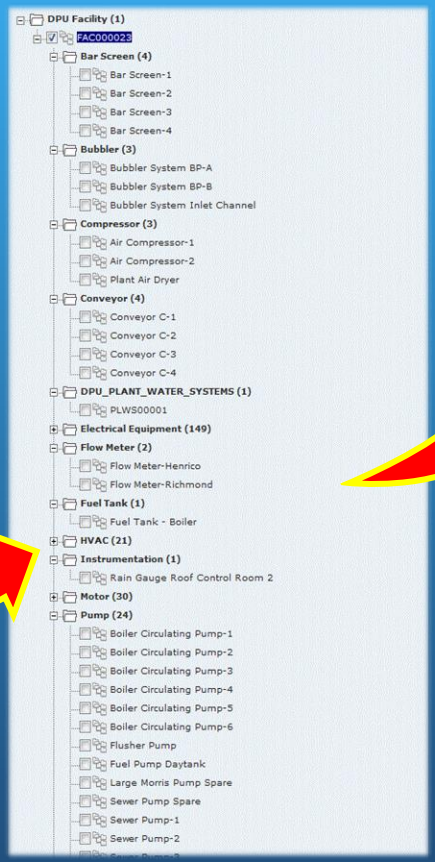
Henrico County – Department of Public Utilities

Data Collection Form

Site No. _____ Site Name Meredith Branch Equipment Type : PUMP

Equipment Name: Chem pump 1 Sheet No. : _____

Identification		Physical Data (cont.)	
Facility ID		Pump Lubrication	Zurn EP-95
Fixed Asset ID		Pump Type of Lubricant	EP 95
OBJECTID		Condition	
Asset ID		Criticality	
Asset Description	Mil Royal G HPD Metering Pump		
		Asset Mgmt.	
Asset Cost Account		Date of Installation	Oct 1, 2015
Service Area/		Original Cost	
Service System		Service Life	
		Type of Depreciation	
Physical Data		Annual Depreciation	
Pump Manufacturer	Milton Roy	Total Depreciation	
Pump Model No.	G56Y8PM471N	Remaining Book Value	
Pump Size	130lbs	Warranty Date	10/1/2016
Pump Serial No.	03793497-1	Replacement Cost	
Pump Class		Salvage Value	
Pump Type			
Pump Capacity (GPM) GPH	75.00	Estimated Remaining Service Life	12 years
Pump Head (TDH/FT)		Date of Remaining Service Life Assessment	10/1/2028
Impeller Diameter (In.)			
Impeller Model No.			
Type of Impeller			
Class			
Type of Joint			
Number of Stages			
PSI	150		
DPU Asset Tag			

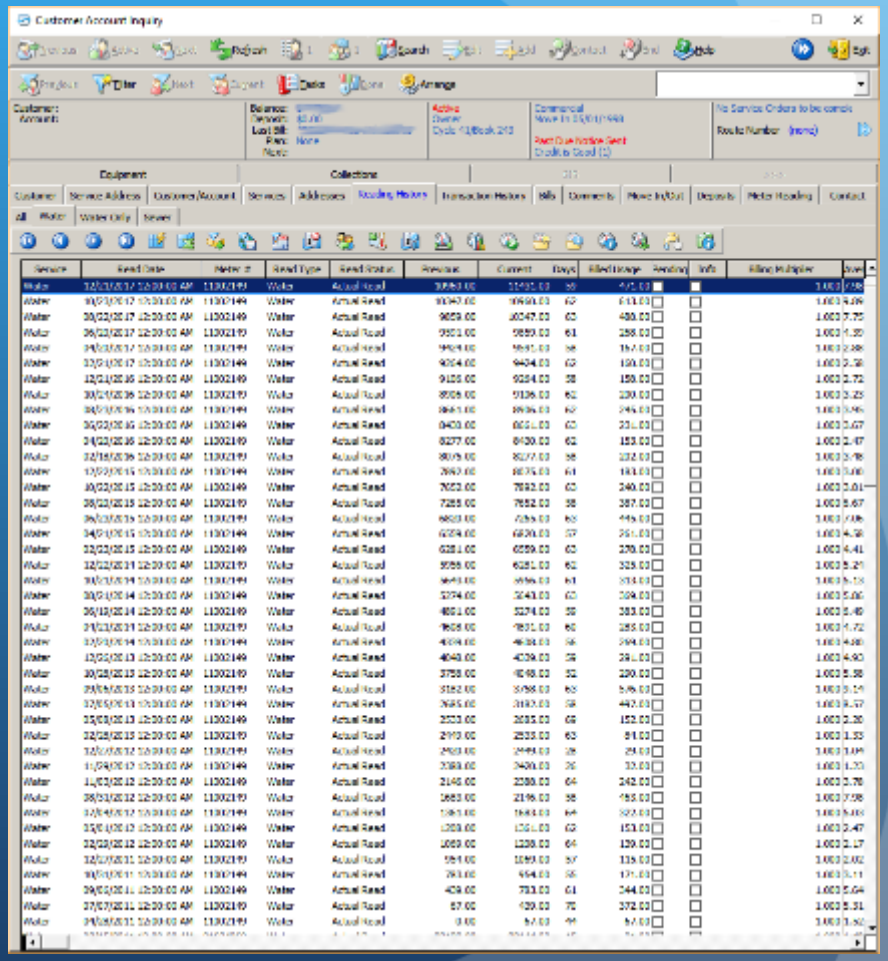


Other systems?

- GIS really ties the room together

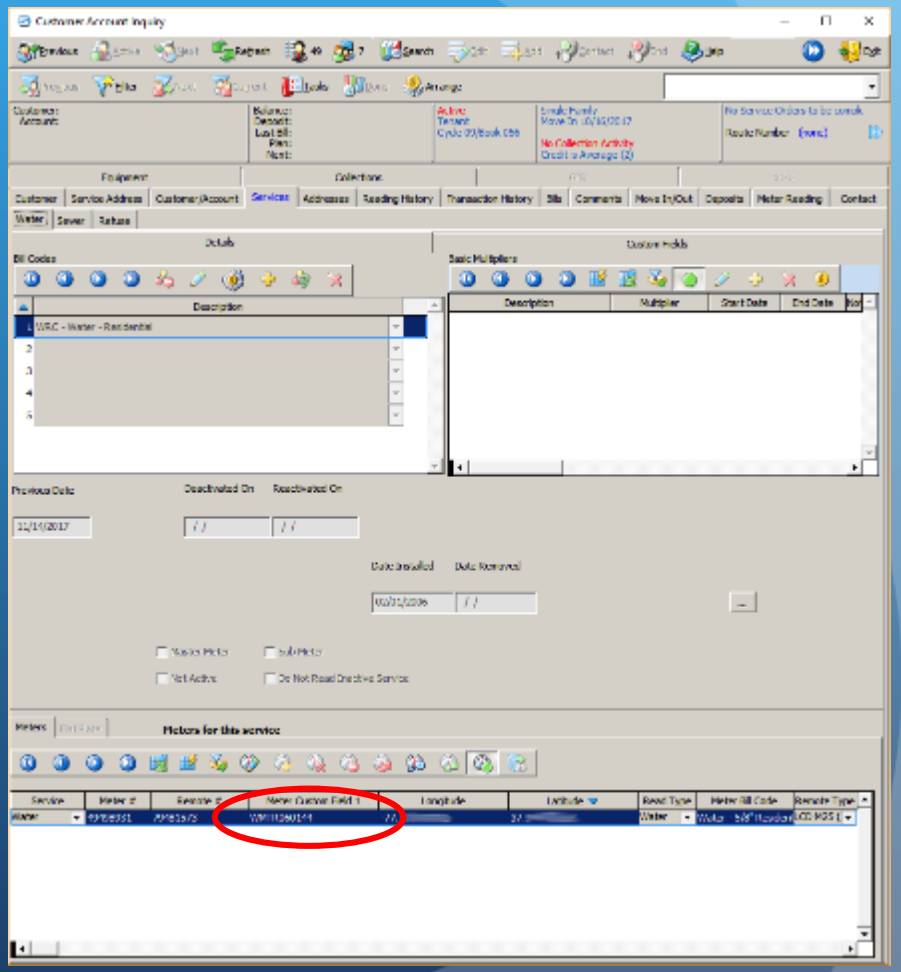
Customer Information System

- Customer information
  - Account
  - Bills
  - Service address
  - Services
    - Meter/Remote information
    - Meter readings
    - Service order origination



Customer Information System

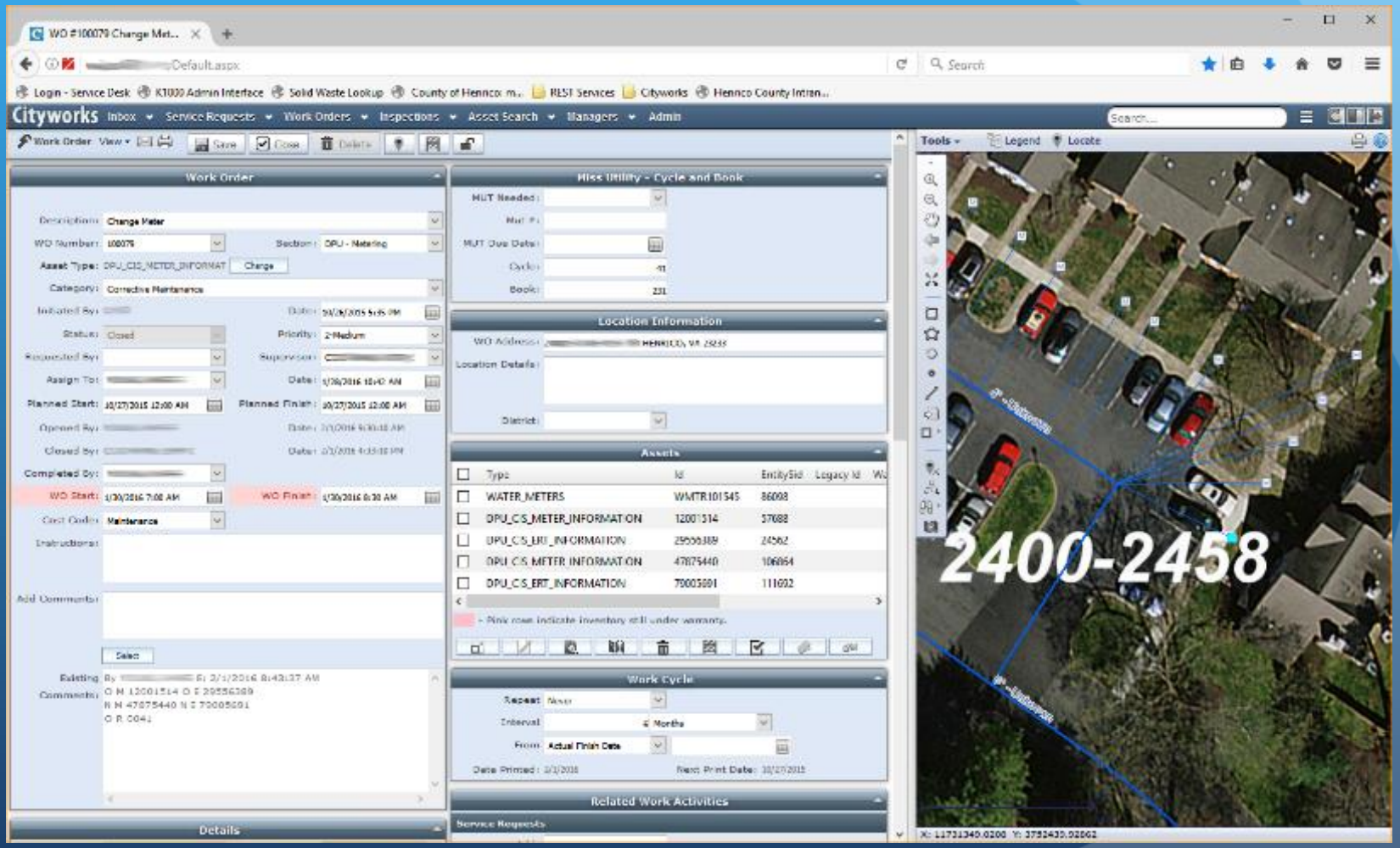
- CIS Infinity®
- Customized interface
  - Includes custom field to join to GIS locations



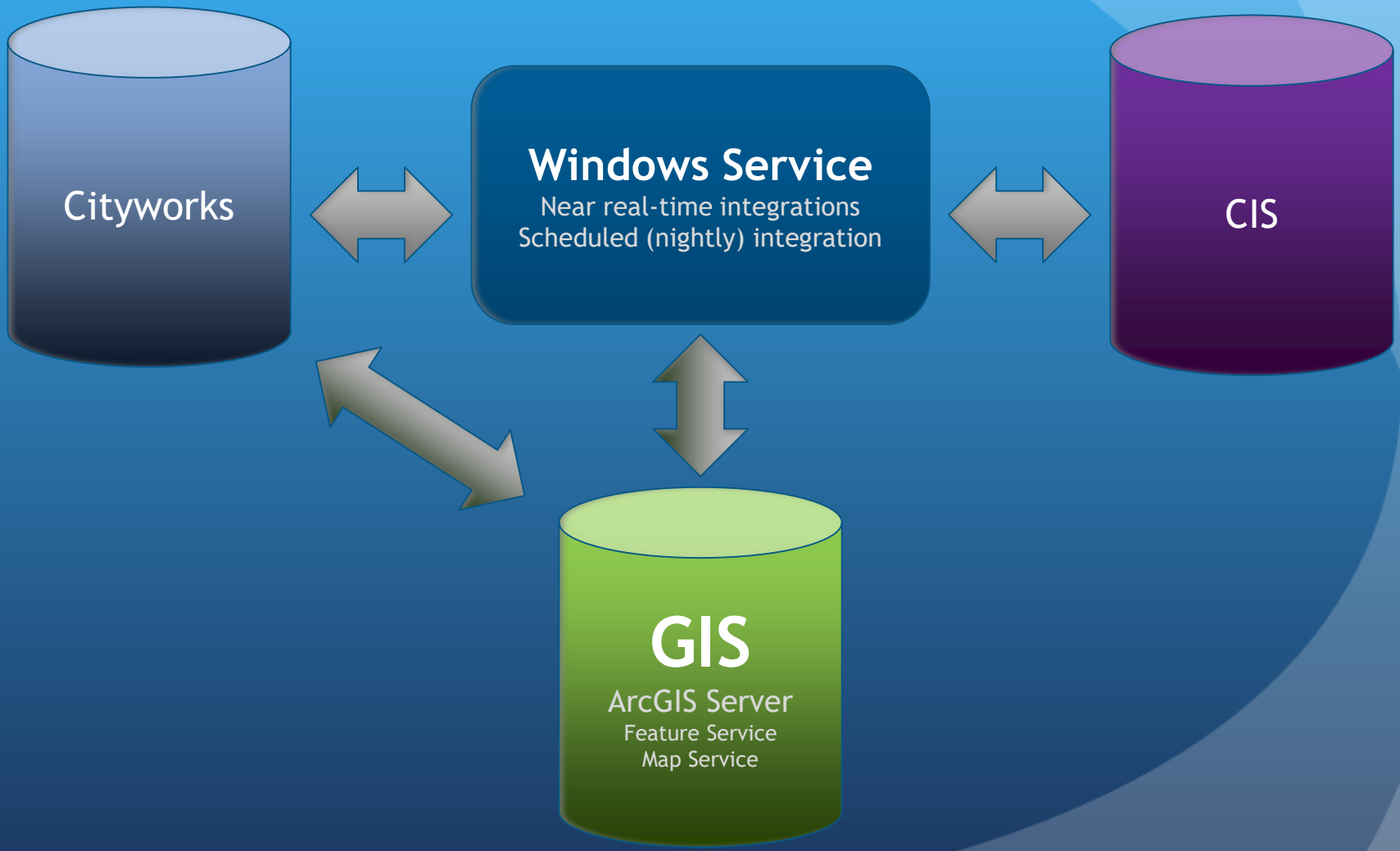
Work Order System

- Cityworks (Azteca Systems)
- Customized interface
  - Includes custom fields to work with CIS
  - Integrated map based on GIS services
  - Hands data back to CIS

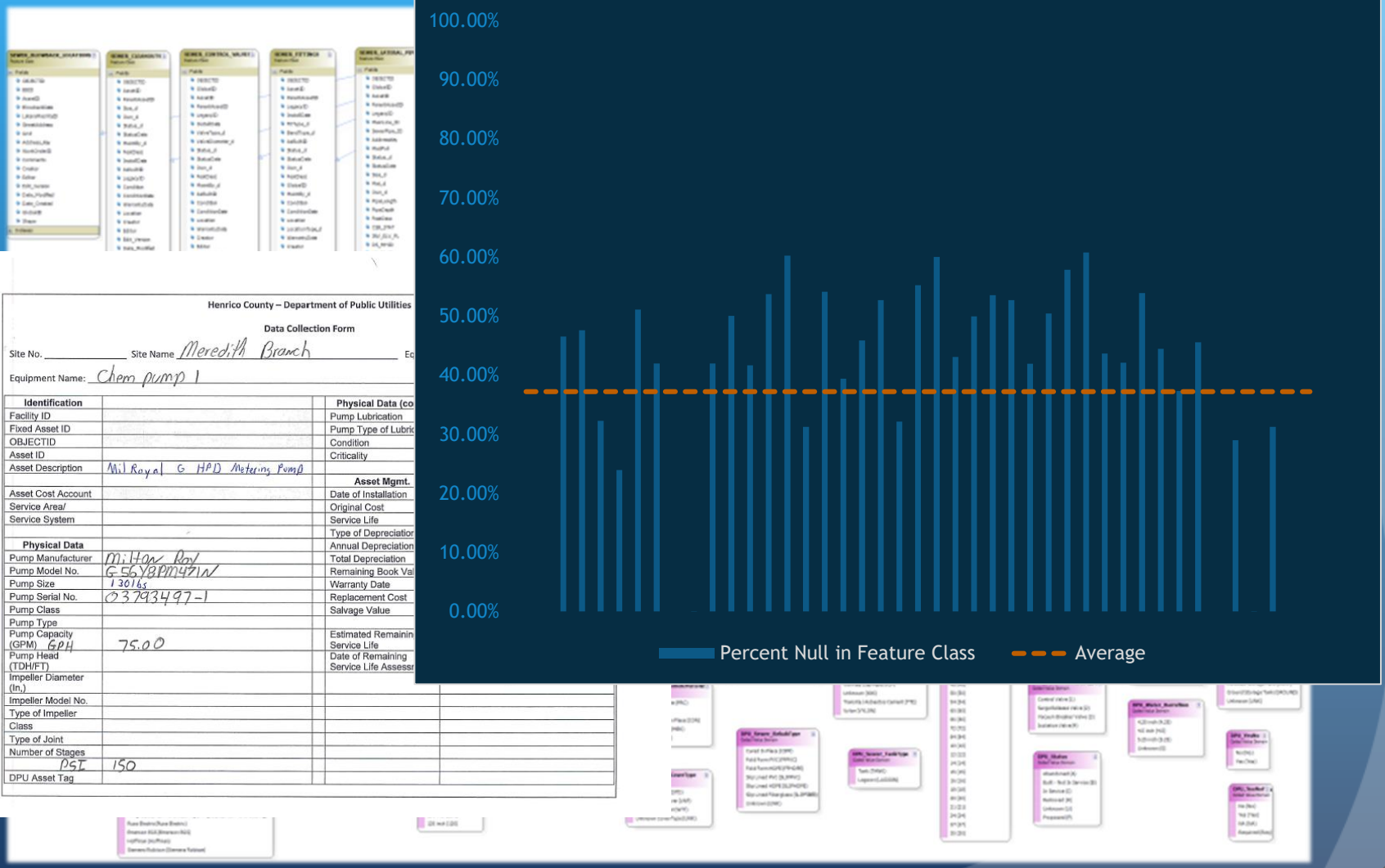
Work Order System



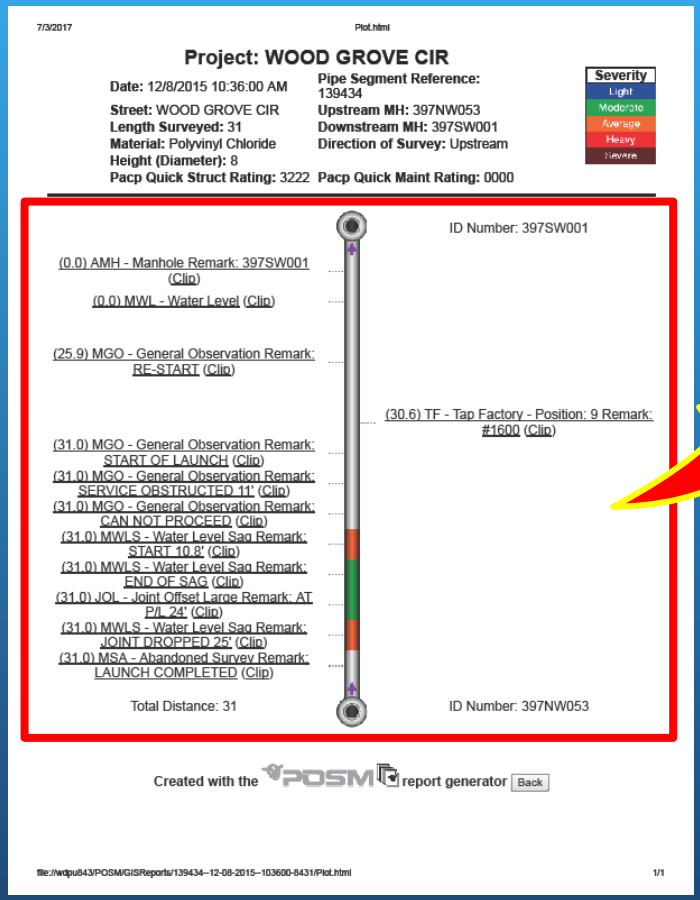
Where is GIS?


Cityworks
Windows Service
Near real-time integrations
Scheduled (nightly) integration
CIS
GIS
ArcGIS Server
Feature Service
Map Service

Process Improvement



System Integrations



7/3/2017 Plot.html

Project: WOOD GROVE CIR

Date: 12/8/2015 10:36:00 AM
Street: WOOD GROVE CIR
Length Surveyed: 31
Material: Polyvinyl Chloride
Height (Diameter): 8
Pacp Quick Struct Rating: 3222
Pipe Segment Reference: 139434
Upstream MH: 397NW053
Downstream MH: 397SW001
Direction of Survey: Upstream
Pacp Quick Maint Rating: 0000

Severity: Light, Moderate, Average, Heavy, Severe

ID Number: 397SW001

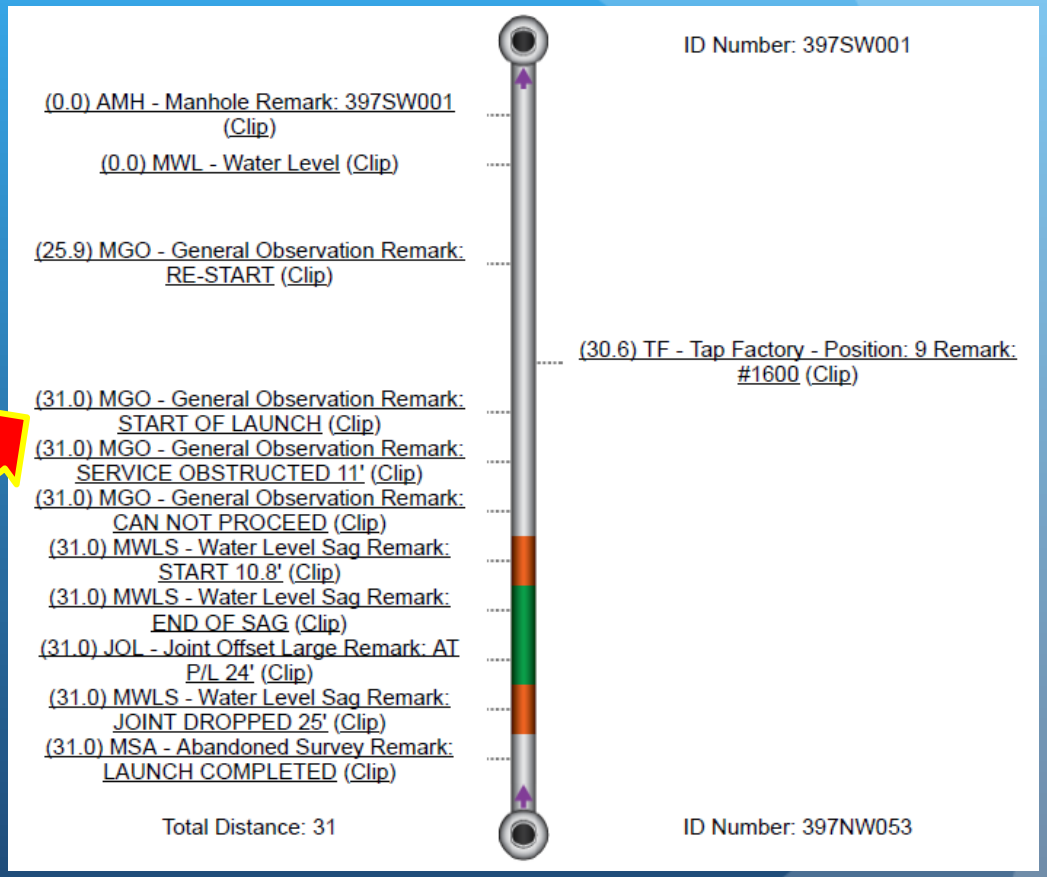
(0.0) AMH - Manhole Remark: 397SW001 (Clip)
(0.0) MWL - Water Level (Clip)
(25.9) MGO - General Observation Remark: RE-START (Clip)
(30.6) TF - Tap Factory - Position: 9 Remark: #1600 (Clip)
(31.0) MGO - General Observation Remark: START OF LAUNCH (Clip)
(31.0) MGO - General Observation Remark: SERVICE OBSTRUCTED 11' (Clip)
(31.0) MGO - General Observation Remark: CAN NOT PROCEED (Clip)
(31.0) MWLS - Water Level Sag Remark: START 10.8' (Clip)
(31.0) MWLS - Water Level Sag Remark: END OF SAG (Clip)
(31.0) JOL - Joint Offset Large Remark: AT P/L 24' (Clip)
(31.0) MWLS - Water Level Sag Remark: JOINT DROPPED 25' (Clip)
(31.0) MSA - Abandoned Survey Remark: LAUNCH COMPLETED (Clip)

Total Distance: 31

ID Number: 397NW053

Created with the POSM report generator Back

file://wdpu843/POSM/GISReports/139434--12-08-2015--103600-8431/Plot.html 1/1



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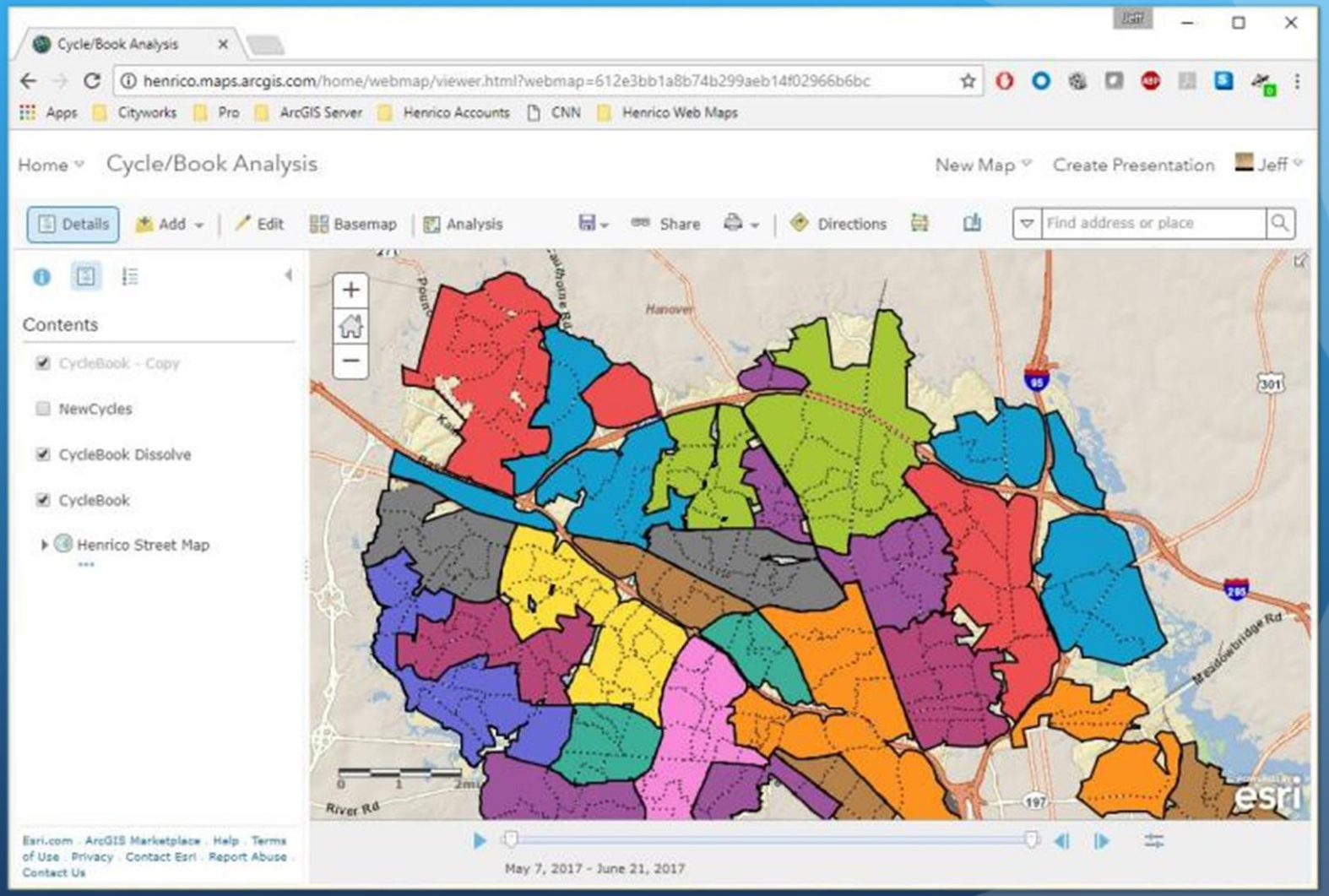

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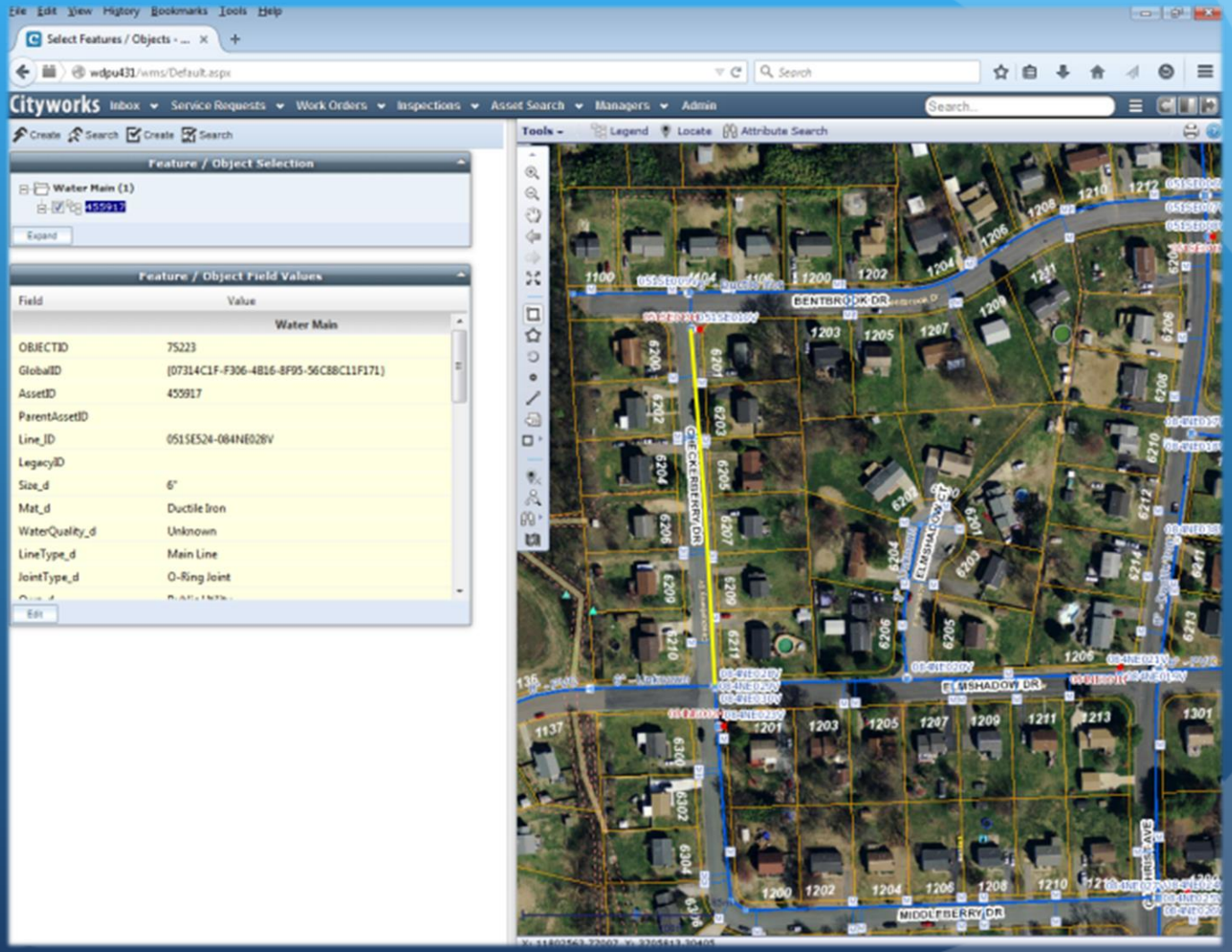

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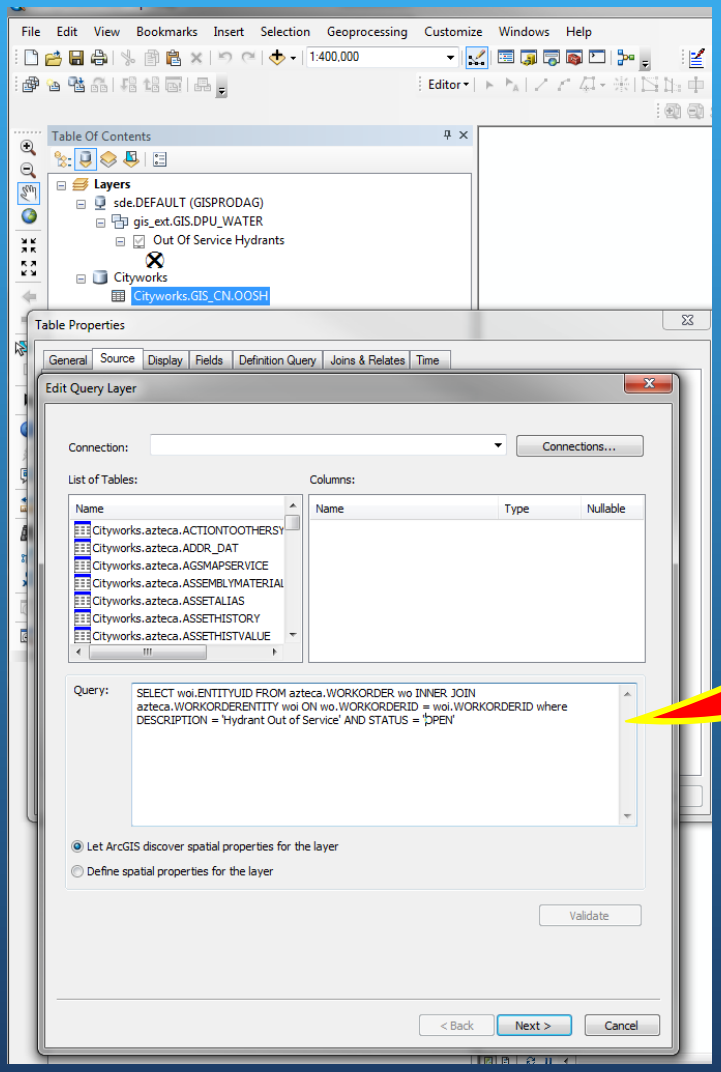

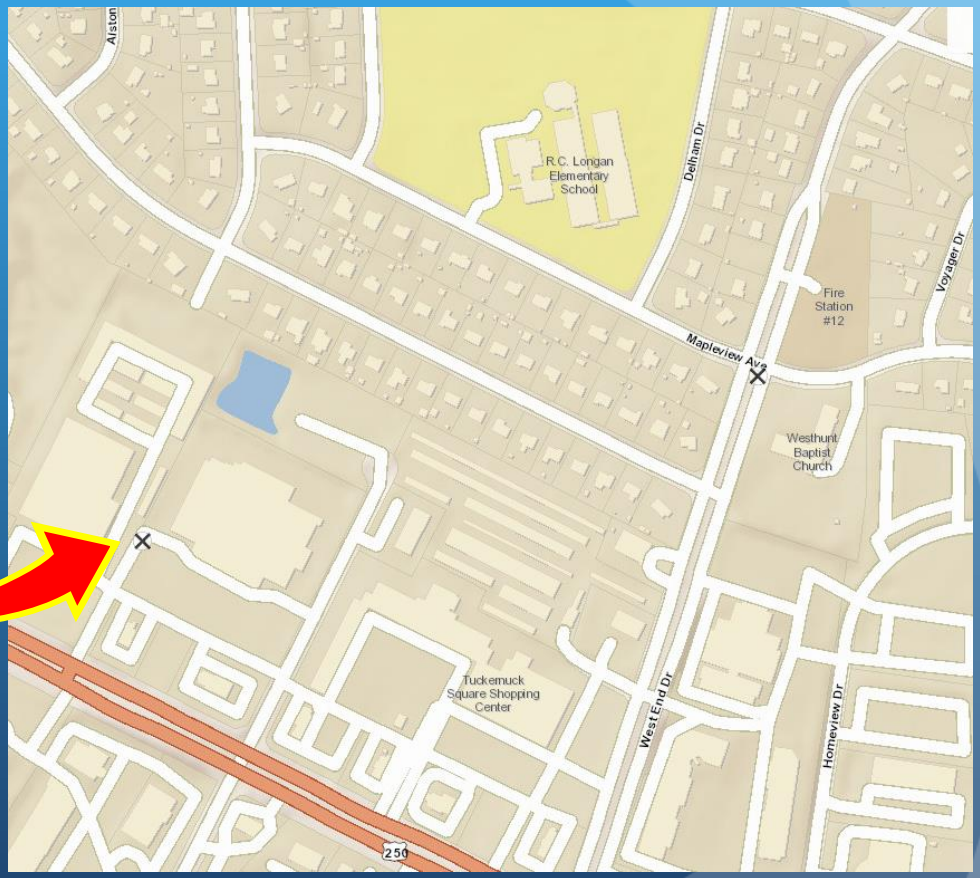

Questions?

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