



How Denver Water Synced GIS and Work Management



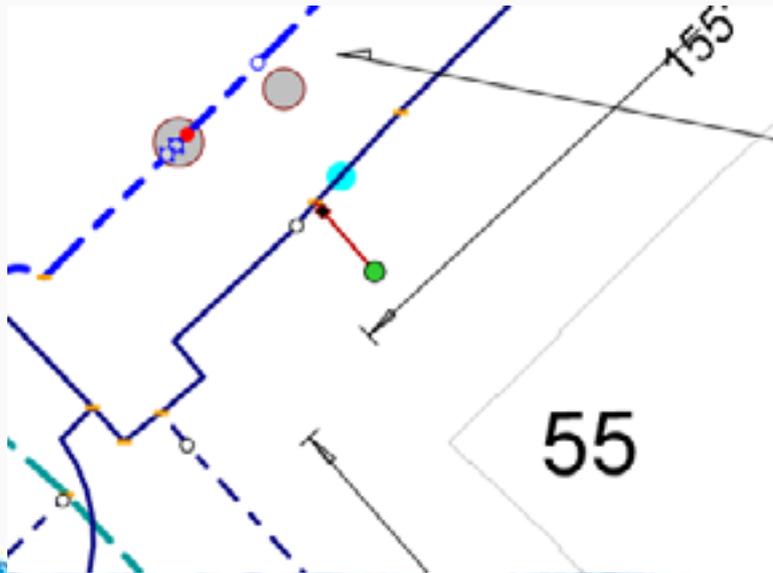
DENVER WATER

What is Asset Sync?

- **Creates a tie between the spatial representation of an asset to its Work & Maintenance Management System record**

Why did we build it?

- So everything in the GIS has a corresponding record in Maximo
- For example this Fire Hydrant #55



Asset	HYD-55	CHAMPA ST & 16TH ST, EC	Site	DW	Attachments
Alias			Type	PRODUCTION	Moved? <input type="checkbox"/>
Function	HYDRANT		Asset Template		Returned To Vendor? <input type="checkbox"/>
Status	OPERATING				Launch EMap

Details

Parent			GL Account	
Maintain Hierarchy?	<input type="checkbox"/>		Priority	2
Location	HB-55	B, EC, CHAMPA ST & 16TH ST	Serial #	
Bin			Failure Class	
Rotating Item			Item Type	
Condition Code			Tool Rate	
Meter Group			Property Tag	
Usage			Design Section	

Purchase Information Costs

Vendor			Total Cost	0.00
Manufacturer	AMD	American Darling	YTD Cost	0.00
Purchase Price	0.00		Budgeted	0.00
Replacement Cost	0.00		Inventory	0.00
Installation Date	11/19/00			
Warranty Expiration Date	11/19/01			
PO				

Downtime Modified

Asset Up?	<input checked="" type="checkbox"/>	Changed By	GIS_ASSETS
Last Changed Date	6/5/10 12:44 PM	Changed Date	6/5/10 12:44 PM
Total Downtime	0.00		



Approach

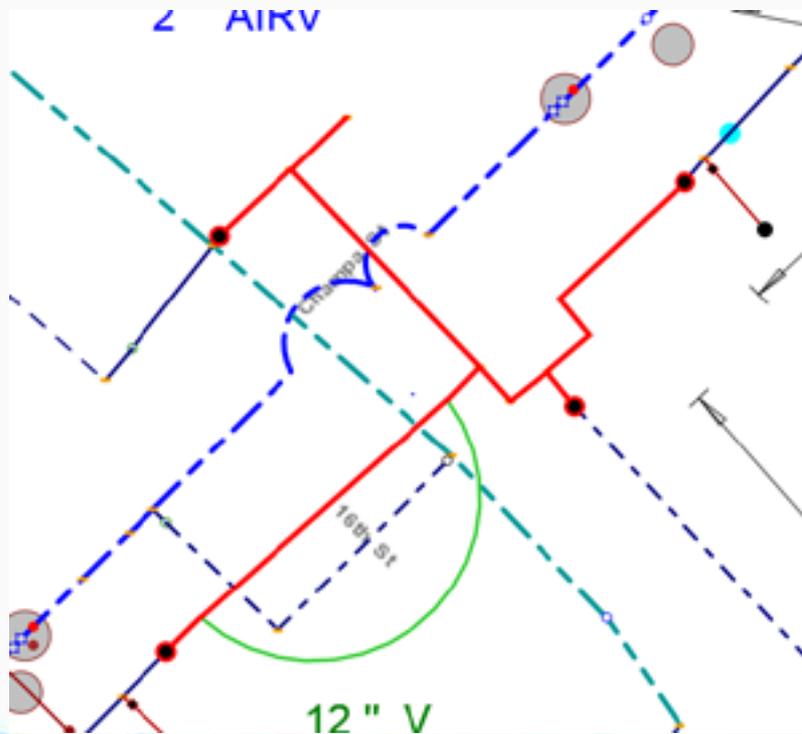
- **Developed sync of Hydrants first**
- **Developed sync of Blow-off as 2nd phase**
- **Water Network project**

Asset Naming

- Buy-in from Maximo users to utilize a new name
- Created a simple structure <Asset Type Prefix>-<Asset Num>
- Structure added 'S' after prefix
- Exceptions

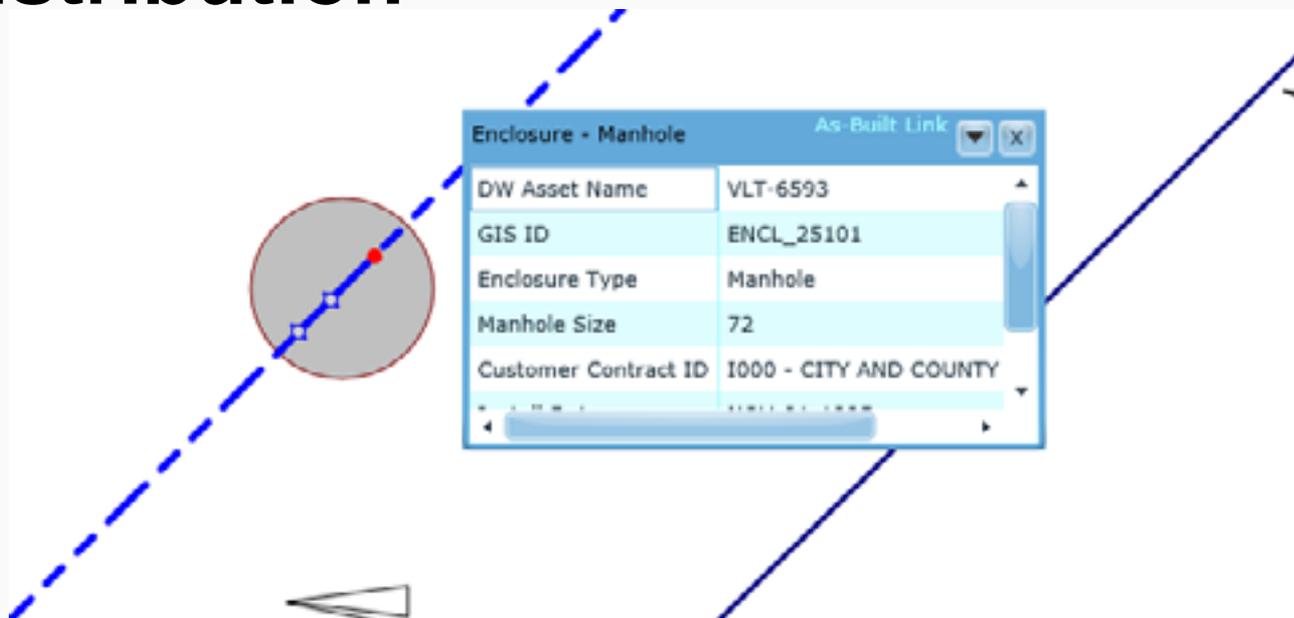
How to manage Maximo hierarchy?

- A span is the part of the network between isolation valves – shown as the red segments in this screen shot



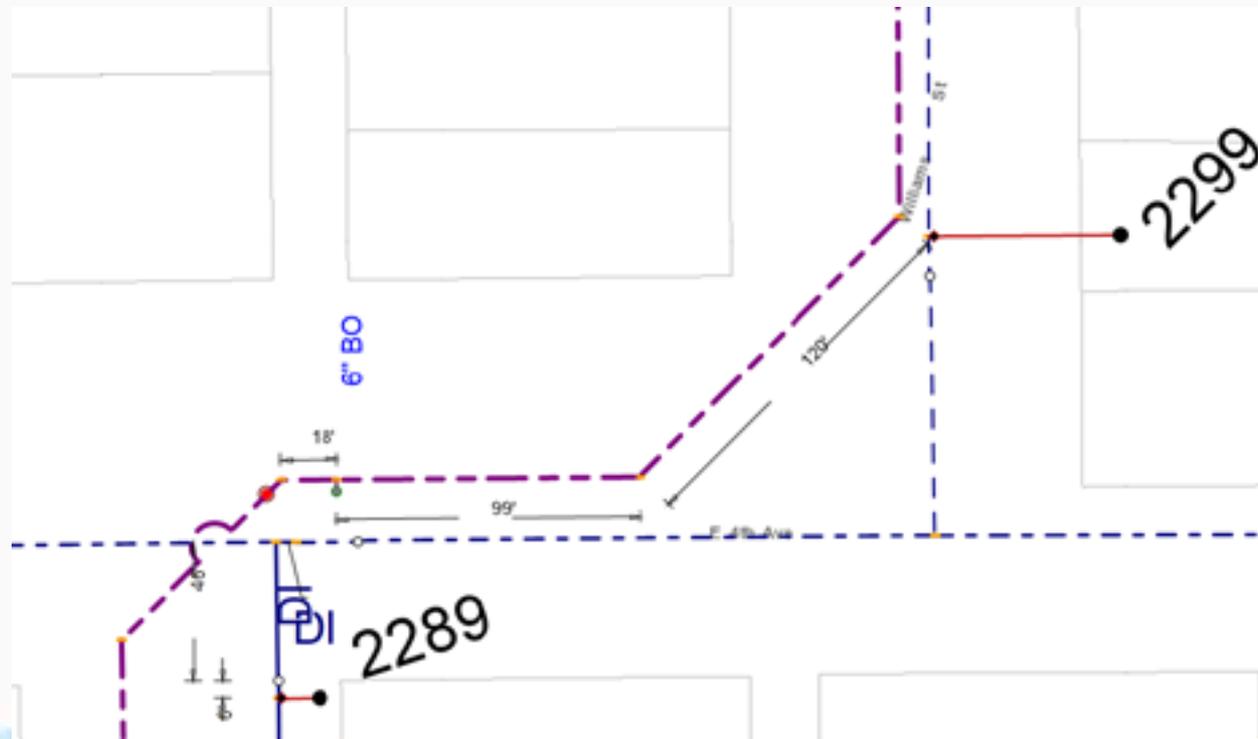
How to manage Maximo hierarchy?

- A structure contains water assets including collection, treatment, and distribution



How to manage Maximo hierarchy?

- Recycle Vs Treated Water – Purple lines in this screen shot are recycle Blue are treated. They are mutually exclusive



User Involvement

- **Attempted to involve users**
- **Users didn't grasp the value of the what we were doing (they do now)**
- **Executive Team put pressure on IT to finish at the end because of lack of understanding**

Scope Change

- **Big changes to scope all the way to the end**
 - Added delays to the project
 - Created frustration for the team
 - Budget and Time overrun
- **Finally froze changes to complete**
- **Tested and eventually pulled the trigger knowing we might find problems**

GIS to Maximo Comparison

- Try to run on a yearly basis
-Here are some of the result of what we found.....

Best of Asset Sync

- **The link between GIS and Maximo is really powerful**
 - **Work Order Creation**
 - **Work Order History**
 - **Main Break Isolation**

Creating work order on Fire Hydrant

The screenshot shows a GIS application interface. On the left, a 'Feature Selection' dialog box is open, displaying a table of selected features. The table has four columns: 'Selected?', 'Type', 'DW Asset Name*', and 'GIS ID*'. The first row is 'Hydrant Branch' with 'HB-954' as the asset name and 'HYDB_130095' as the GIS ID; its 'Selected?' checkbox is unchecked. The second row is 'Hydrant 6"' with 'HYD-954' as the asset name and 'HYDT_55513' as the GIS ID; its 'Selected?' checkbox is checked. Below the table are buttons for 'Select From Map', 'Clear Selection', and 'Create Work Order'. On the right, a map view shows a blue line representing a pipe with a '4\"/>

Selected?	Type	DW Asset Name*	GIS ID*
<input type="checkbox"/>	Hydrant Branch	HB-954	HYDB_130095
<input checked="" type="checkbox"/>	Hydrant 6"	HYD-954	HYDT_55513

Maximo Work Order created

Quick Reporting Specifications

Find: Select Action

Work Order: 13-154574 Hydrant Leaking

Location: HB-854 8, EC, CALIFORNIA ST & 31ST ST

Asset: HYD-854 EC, CALIFORNIA ST & 31ST ST

Map ID

Vicinity: 3118 CALIFORNIA ST, DENVER, CO 80205

Classification

Class Description

Work Group: TCMETRO

Supervisor

Lead: REGUESDO

Work Type: SRV

Sub-Work Type

Priority: 3

Target Finish: 6/11/13 3:43 PM

Attachments

Status: WAAPP

Status Date: 6/11/13 3:42 PM

Parent WO

GL Account

Inherit Status Changes?

Asset Up?

Orig. Section: IT

Reported By: REUMBK 303-426-6262

Reported Date: 6/11/13 3:43 PM

Launch EMap

Multiple Assets, Locations and Cla: Filter 0 - 0 of 0

Asset	Location	Configuration Item	Target Description	Sequence	Mark Progress?	Site
No rows to display.						

Select Clear All New Row

Tasks: Filter 0 - 0 of 0

Sequence	Task n	Summary	Estimated Duration	Route	Route Stop	Status
No rows to display.						

New Row

Labor Materials Tools Failure Reporting Log

Labor: Filter 0 - 0 of 0

Task	Labor	Name	GL Debt Account	HC	Regular Hours	Start Date	Start Time	End Time	Approved?
No rows to display.									

Select Labor Select Planned Labor New Row

Work Order History on Hydrant

Work Order History

Query Results

Page 1 of 1

WO Number	Status	Work Type	Details	View In Maximo
10-188399	CLOSE	PM	Details	View
11-196454	CLOSE	PM	Details	View
12-197506	CLOSE	PM	Details	View

Dismiss

714

Weller St

What would we do differently?

- Use iterative approach using Agile
- Too many people in charge

What would we do again?

- **Take the time to create the architecture and planning**
- **Taking on small pieces to begin with**
- **Set aside days to put all the needed players in one room to get work done**

Where are we today?

- **Still being tweaked**
- **Additional features being added**
 - **Backflow preventers**
 - **Adding notification to business based on changes**
- **Fully adopted by the business (we've gone from 'doing apps to the business' to 'doing apps for the business' to 'doing apps with the business')**

Future

- **Additional features added to sync**
- **Bi-directional syncing?**
- **Track PM work in a spatial context**



DENVER WATER

The logo for Denver Water, featuring a stylized blue 'D' icon to the left of the text 'DENVER WATER' in a bold, green, sans-serif font. The text is positioned above a horizontal line of splashing blue water that spans the width of the page.