

# GIS Technology Session

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## Geographic Information Systems & Asset Management

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# Why GIS

## ■ Many already have GIS

- Regulatory Drivers
- Attrition
- Master Plans
- Central Data Repository



## ■ GIS typically underutilized

- Slowly build AM capabilities
- Build the asset inventory
- Simplify workflows
- Develop a data maintenance process

# GIS Capabilities

## Asset Inventory

- Core of GIS
- Required for AM
- Integration Options – Linked or Embedded
- Relational

Presque Isle Utilities District Hosted by Sewall

Fixture	Address	Street	Location Description	Installation Date	Last Service Date	Longitude	Latitude	Account Number	Homeowner's Notes	Remark	Fixture Diameter	Fixture Condition	Main Size
Hydrant	40	Wilson St				68° 1' 3.660" W	46° 41' 19.178" N	null					6"
Hydrant	16	Summer St				68° 0' 40.856" W	46° 41' 13.031" N	null					6"
Hydrant	654	Main St				68° 0' 47.009" W	46° 41' 13.336" N	null					12"
Hydrant	16	Griffin St				68° 0' 14.810" W	46° 41' 13.162" N	null		Zippel Elementary School			8"
Hydrant	6	North St				68° 0' 45.909" W	46° 41' 13.027" N	null					12"

10 features 0 selected

**Asset: Hydrant**

Address	654
Street	Main St
Location Description	
Installation Date	
Last Service Date	
Longitude	68° 0' 47.009" W
Latitude	46° 41' 13.336" N
Account Number	
Homeowner's Notes	
Remark	
Fixture Diameter	
Fixture Condition	
Main Size	12"
Clockwise to Close?	
Turns to Close	
Normally Open?	
Currently Open?	
Currently Operable?	
Bypass Valve	
Hydrant - Number	72
Hydrant - New ID	72
Hydrant - Current ID	72
Hydrant - Type	Blue
Hydrant - Cap Color	Blue
Hydrant - Min Flow	1500
Hydrant - PStatic	
Hydrant - Flow Date	
Hydrant - Who Flow	
Hydrant - PResidual	

# Condition Assessment

## Track Asset Condition

### Edit attributes

#### Water Mains

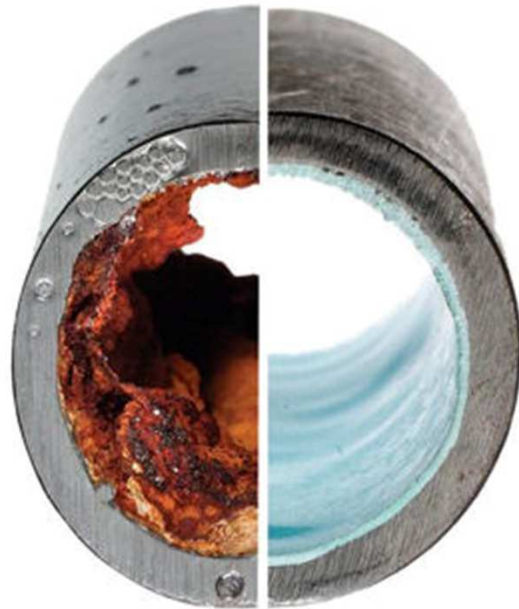
Line Id	353
Street Name	WOOD ST
Type	
Diameter	6
Material	UNKNOWN
Pipe Length	
Depth Of Bury Below Grade	6
Cover Depth	
Condition	null
Year Placed In Service	Excellent
Last Maintenance Date	Good
Notes	Poor Fair Needs Replacement





# Value

➤ What is it worth?



- Depreciation Method - GIS
- Modified Approach - AM



# Geospatial Tools

Heat Maps  
Mobile Workflows  
Geocoding



# Base Mapping

## Utilizing Other Geospatial Data

- Aerial Photography
- Terrain Models/Contours
- Parcel Data
- Public Works Data



# Asset Management Functions

- **What can AM do that GIS does not (out-of-the-box)**
  - **Work Orders...**
  - **Non-spatial Data**
  - **Advanced Reporting**
  - **Advanced Budgeting**
  - **Modified Approach Accounting**
  - **Prioritizing Infrastructure Replacement**



# Asset Management Functions



# Summary

<b>GIS</b>	<b>Asset Management Software</b>
Asset Inventory	Work Requests and Work Order System
Condition Assessment	Tracking Personnel, Materials, Equipment
Value using Depreciation Method	Advanced Reporting Functionality
Asset Geospatial Analysis	Advanced Budgeting Capabilities
Base mapping	Value using Modified Approach
Integrated with an AMS	Prioritizing Infrastructure Replacement

# GIS For Asset Management

- **Decreasing costs for implementation of GIS**
- **Start Small – Build Workflow Efficiencies**
- **Many options for GIS and AM**
- **GIS can be migrated/integrated with future AM**

# Sustainable Operations

## Questions

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