

Managing Utility Asset IDs and Links to Related Documents with ArcGIS

City of Baltimore Department of Public Works



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History & Background

§ Utility System Size

§ Water

- § City of Baltimore, Baltimore County, and small portion of adjacent Anne Arundel County
- § TODO: Number of water main features, water valves, customers, etc.

§ Wastewater

- § City of Baltimore
- § TODO: Number of features

§ Stormwater

- § City of Baltimore
- § TODO: Number of features

History & Background

§ Initial conversion to GIS

§ 1997

§ Decision on structure of feature IDs

- § Engineering staff wanted an ID format that would allow them to quickly determine the vicinity of the asset
- § Not the greatest ID technique for management of data
- § Separation of functional and meaningful IDs

History & Background

§ TODO: Import diagram of ID structure from revision guidelines document

History & Background

§ Document Management System (circa 2008)

- § Selection Criteria:

 - § TODO

- § OnBase from Hyland Software

§ TODO: pictures

The Problem

§ Aging Utility Infrastructure

- § Requires frequent rehabilitation and replacement contracts

- § Generates huge volume of documents (engineering plans, inspection reports, etc) that need to be linked to features

- § How do we manage the changes to the features and their IDs while maintaining links to these critical documents?

The Solution

§ Set of custom ArcGIS Desktop add-ins

§ ID creation and tracking tools

- § 1 for each utility (water, wastewater, stormwater)

- § Creates new feature IDs based on spatial location and type of feature

- § Tracks ID updates by writing to updates table

- § Use these tables to update document keywords in OnBase

§ Document entry and GIS feature linking tool

- § Allow users to enter info about drawing and link it to the depicted utility assets

The Solution

§ Python scripts

§ URL update script

- § Ensures all features with linked documents have the correct link to the OnBase web client

§ ID updates table script

- § Generates OnBase keyword update queries from ID update tables (generated from ID creation ArcGIS Desktop add-in)

§ Overnight script to create IDs for features that may have been missed by editors

- § Leverages same backend tables as ID add-ins

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