Utilizing GIS to Enhance Environmental Compliance at Maryland Transit Administration

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  AECOM / MTA OSQARM
MTA Overview
Project Background and Need
Application Live Demonstration
Project Issues, Challenges & Benefits
Questions / Comments
Maryland Transit Administration

- Twelfth Largest Transit Agency in US.
- Over 120 Million Passenger Trips Annually.
- 6 Operational Modes.
  - Local Bus - Mobility
  - Light Rail
  - MARC
  - Metro
  - Commuter Bus
Project Background

- MTA was under Consent Agreement with Environmental Protection Agency.
- In lieu of a portion of the fines MTA is completing a Supplemental Environmental Project (SEP).
- SEP required creation of GIS application.
The Need

MTA’s ‘GIS’ circa 2006

<table>
<thead>
<tr>
<th></th>
<th>Tank Farm A</th>
<th>Tank Farm B</th>
<th>Tank Farm C</th>
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<tbody>
<tr>
<td><strong>ATF</strong></td>
<td>1000 G</td>
<td></td>
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<tr>
<td><strong>Solvent Waste</strong></td>
<td>550 G</td>
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<tr>
<td><strong>Antifreeze</strong></td>
<td>6000 G</td>
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<tr>
<td><strong>Motor Oil</strong></td>
<td>10,000 G</td>
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<tr>
<td><strong>Used Oil</strong></td>
<td>2000 G</td>
<td>1000 G</td>
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<tr>
<td><strong>Waste Oil</strong></td>
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<tr>
<td><strong>Diesel Fuel</strong></td>
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<tr>
<td><strong>Heating Oil</strong></td>
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</tr>
<tr>
<td><strong>Waste Oil</strong></td>
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<tr>
<td><strong>GASOLINE</strong></td>
<td></td>
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<td>10,000 G</td>
</tr>
</tbody>
</table>
The Need

MTA’s GIS now.

Documents for Aboveground Storage Tank

<table>
<thead>
<tr>
<th>Document</th>
<th>Link</th>
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</thead>
<tbody>
<tr>
<td>MTA - UST and AST Inventory and Tracking Database.xls</td>
<td></td>
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</tbody>
</table>
The Application

- Transit Integrated Geospatial Environmental Reporting System (TIGERS).
- A web based mapping and information system.
- Internal to MTA (not public facing).
- Enhances Environmental Compliance and Emergency Preparedness.
- Provides information for MTA’s nine Maintenance and Storage Facilities.
- Linked to MTA’s ProjectWise doc. mgt. system
MTA GIS (MTAcgis)

mtawbgisweb1

mtawbgisweb2

mtawbgisweb3

mtawbgis1

mtawbgis2

mta-db-1

mtapwint2

mtaspinform

TIGERS Application

Production ArcGIS for Server 10.1 Enterprise Advanced (8 Cores-2 Licenses)

Production ArcGIS for Server 10.1 Enterprise Advanced (8 Cores-2 Licenses)

Database Server ArcSDE, SQL Server 2008

ArcGIS for Desktop 10.1

TIGERS Application

Staging ArcGIS for Server 10.1 Enterprise Advanced (8 Cores-2 Licenses), ProjectWise Proxy Server

6 Saint Paul St.

Various MTA Facilities

Washington Blvd

TIGERS Application

TIGERS staging app.

6 Saint Paul St.

Inform.net, SQL Server 2012

Veeder-Root Tank Gauges

TIGERS Physical Infrastructure

5/11/15
Application Demonstration
Fieldwork - Safety

- Extensive data development effort
- Site data assembled, and .mxds created in advance
- Wherever possible, verify rather than collect
- Connect a desk w/ laptop – attribute capture
- Active transit maintenance facilities
- Signed safety procedures document
Issues, Challenges & Benefits

- Awareness
  - Monthly Environmental Compliance Committee
  - Training at modes (i.e. bus, light rail, metro)

- Developing for Internet Explorer 8
- Promotion of GIS throughout MTA
  - Bringing new users into GIS
  - Quarterly MTA GIS User’s Group
Questions/Comments?

Project Contact

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