Integration Sewer Televising

GIS and Maintenance

2013 CEAM
Brooklyn Center, MN

January 13, 2013
Rebecca Blue
Investigative Techniques.

- Flow Monitoring-Temp Meters **
- Smoke Testing **
- Dye Water Flooding *
- Closed Circuit TV Inspections **
- System Modeling *
- Property Inspections **
- Foundation Drain Testing *
- Manhole Inspections**

- ** ArcGIS\Cityworks used for Inspections and reporting. Crystal Reports and accompanying maps
- *ArcGIS Used
Efficient /Effective Process to Organize All Inspection Information For Timely and Productive Analysis
Develop Pilot Project to Integrate CCTV with Cityworks and ArcGIS
Produce results measured in saving of money, time and to develop process that is repeatable (Multi-Year Program)
Previous Inspection Process
Pilot Preparation

**Step 1**
Review prior process and results from previous years

Paper Reports/Video and redlines

**Step 2**
Discuss PACP Compliant Process and Software

Contractor has software but not Certified

**Step 3**
Meet with Contractor re televising software and sample export in PACP Format

**Step 4**
Test Import of PACP CCTV software export into Cityworks using CCTV Reader – Hand entering attributes

**Step 5**
Work with Contractor to field map geodatabase attributes to CCTV software fields

Contractor using ArcGIS

Results not standard - too subjective

Contractor attends PACP Training

Sample export in PACP 2.0 *Need 4.2

Identify issues and work with contractor

Eliminates 95 % human import errors

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**NASSCO** - National Association Sewer Service Companies

**PACP** - Pipeline Assessment Certification Program

*Standard practice, data dictionary-data

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Field Maps and ArcGIS provide a tool to mark up progress and for Redlines which are used later for QA/QC Process.
Contractor provides NASSCO Exchange Inspection Data MPEG and Still Photos on External Hard drive

Facility ID is used as Pipe ID to tie inspections back to ArcGIS
Mpeg-Report-Still Photo-Report
Folder Structure- Delivered on External Drive
Import of NASCCO Exchange Inspection Data Into Cityworks CCTV Reader
### Inspection Search

#### Inspection Results in Cityworks

<table>
<thead>
<tr>
<th>Inspection ID</th>
<th>Inspection</th>
<th>Inspection Date</th>
<th>Inspected By</th>
<th>Work Orders ID</th>
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**Pipe Details**

- **Pipe ID**: 5962
- **Pipe Type**: GRAVITY MAIN
- **Pipe Location**: UPS 0621
- **报纸**: 0627

**Pipe Properties**

- **Pipe Length**: 339.60 ft.
- **Material**: Polyvinyl
- **Pipe Diameter**: 8.00 in.

**Drain Area**

- **Steel**: Lorington Ter.
- **City**: Minnetonka

**Ratings**

- **Structural**: 0.00
- **Hydraulic**: 0.00
- **Flow**: 0.00
- **Overall**: 0.00

**Buttons**

- **Form Layout**
- **Delete**
- **Print**
- **Clear**
- **Save/Update**
Televising Inspection Results in ArcGIS
Review Results in Cityworks
GIS Tools Streamline the Displaying of Sewer TV Observations in ArcGIS
Results used by Engineering and Public Works to identify Street Project Utility Needs
New GIS Tools Combined with Inspection Information - Heat Map – Infrastructure Rehab Planning
What’s Next?  
2013  
More Mobile
2013 Deployment of Cityworks Server Web GIS Applications and Going Mobile
Mobile Device Inspections

Meter Inspection Form

Readings 2012
1,001

Inspection Status
Closed

Inspection Comments
Everything is working correctly.

Full Address
Riverside, CA

Work Order #
2014
Thank You!

Questions / Comments
Becky.blue@sehts.com
651.490.2148