Sanitary Sewer
Private Sector Televising
Solicitors/Managers Meeting
June 29, 2016
Administrative Consent Orders

January 2004

ALCOSAN communities signed orders, which required municipalities to:

- Map the collection system
- Televise the sewer system
- Flow monitoring
- Perform private sector inflow testing (both area wide and time of sale – separate systems only)
- Make critical system repairs
- Develop feasibility studies in order to participate with ALCOSAN in a regional long-term wet weather control plan
Phase I Consent Orders

December 2015

ALCOSAN communities signed updated orders, which required municipalities to:

- Submit progress report by 12-1-2016
- Complete a Source Reduction Study by 12-1-2017
- Undertake at least one flow reduction demonstration project to be completed by 8-1-2017
  - Projects completed in prior 2 years eligible for compliance
- Testing of private laterals upon sale or transfer of property is listed as 1 of 4 options to comply with demonstration project.
- Continue O&M Program (including time-of-sale dye testing) and SSO Response Program
3RWW Feasibility Study Working Group

Private Sector Subcommittee Members

- Jerry Brown, South Fayette Township Municipal Authority
- Lawrence Lennon, P.E., D WRE, Lennon, Smith, Souleret, Inc.
- Jason Stanton, P.E., Lennon, Smith, Souleret, Inc.
- Emily Gaspich, P.E., Gateway Engineers, Inc.
- Michael Henry, Unity Township Municipal Authority
- Stanley Caroline, Penn Township Sewer Authority
- Dennis Blakley, McCandless Township Sanitary Authority
- Andrew Blenko, P.E., J.D., North Huntingdon Twp. Municipal Authority
- Charles Gilbert, North Huntingdon Twp. Municipal Authority
- M. John Schon, P.E., Butler Area Sewer Authority
- Dan Slomers, Butler Area Sewer Authority
- Gary Parks, Peters Township Sanitary Authority
Commenced meeting in late 2011

Objectives included reviewing/analyzing efforts of sanitary sewer communities regarding private sector sewers.

Primary focus was on communities with programs that included televising private laterals as a component of their program and to create guidance documentation.
Various statistics compiled

Emphasis on “lessons learned” and quantification efforts

Created summary spreadsheet of on-going programs that include lateral televising

Compared program similarities/differences

Compiled procedures for inspection/testing methods
FSWG Private Sector Subcommittee Final Working Group Document

- Detailed report, analysis and findings posted on the 3RWW Municipal Data support website
- Private Sector Subcommittee Community Summary (handout)
Example of Lateral Defect
Example of Lateral Defect
Example of Lateral Defect
S.W. PA PRIVATE SECTOR LATERAL PROGRAMS
Fox Chapel Borough

Number of Customers: Approx. 1,895
Miles of Sewer: Approx. 78
Type of Pipe: VCP, PVC, & DIP (Primarily VCP)

Dye Test Program initiated in 1990
Lateral Televising initiated in 2001
Testing required at time of sale of property
Dye test and lateral televising done by registered plumber in the presence of a borough representative

Observed structural defects, root intrusion, any evidence of infiltration or inflow will result in a failure to the testing

Property owner is responsible for repairs to the main line wye.

Work can be done after closing provided a Temporary Document of Certification/Agreement is executed

Same properties have failed on multiple occasions on resale (most repeat failures related to inflow sources such as low vents or defects associated with clean-outs)
Number of Customers: Approximately 3,300

Miles of Sewer: 69
Type of Pipe: VCP, PVC, & DIP
(Primarily VCP)

Dye Test Program initiated in 1997
Lateral Televising initiated in 2002
Requires testing at time of sale of property
Dye test and lateral televising done by registered plumber in the presence of a township representative

Structural defects, roots, or any evidence of infiltration or inflow are factors which will determine a failure.

In 2007, new ordinance requires failed lateral be replaced from foundation to main, plus wye if defective

Work can be done after closing provided a Temporary Document of Certification/Agreement is executed
818 inspections performed 2005 through 2011

60% overall fail rate; 463 or 56.6% failed lateral televising portion of the inspection

66 other inspections failed dye test portion of the inspection for inflow sources during this time period

26,800 feet of lateral replaced during that time frame of which 5,200 (19%) was done via cured-in-place (CIPP) lining
O'Hara Township 2005 Through 2011

- Wyes Replaced, 25
- Downspouts, 19
- Area Drains, 21
- French Drains or Sumps, 5
- Vents Only, 21
- Multiple Violations, 35
- Lateral Defects, 463
South Fayette Township Municipal Authority

Allegheny County

Service Area = 21 sq mi.
# of Customers: 6,300
(97% Residential)

Vast majority of system constructed after 1972.

Miles of Public Sewer: 130

Type of Pipe: 67% PVC
26% VCP
7% Other

Lateral televising initiated in 2007 (Time of Sale and New Construction)
Area Wide inspections also performed
MATSF: ALCOSAN Agreement - Key Items

- 1983 Agreement allowing South Fayette Township to connect to the ALCOSAN system called for payment of a $1.12 Million capital fee to ALCOSAN for 2.4 MGD of average daily flow

- Agreement has an excess Infiltration/Inflow (I/I) surcharge clause

- Requires MATSF to perform necessary monitoring and reporting to quantify excess I/I commencing in 1988

- MATSF was the first of approximately 7 ALCOSAN communities to execute an Agreement containing I/I surcharge language
MATSF-ALCOSAN Agreement (I/I Related Amendment)

- In 1996, ALCOSAN agreed for MATSF to begin using excess I/I funds for in-house studies, equipment and rehabilitation projects geared towards reduction of I/I
  - 1987-1996 $417,000 MATSF Paid to ALCOSAN
  - 1997-2015 $2,464,000 MATSF Escrowed
  - Accumulation/Use of escrowed funds is tracked via annual certification documentation
- Approx. 6 other communities with similar I/I Agreements with ALCOSAN have same opportunities to self escrow/utilize funds
MATSF Private Sector Committee recommended that a report be compiled documenting need for MATSF to pursue a formal lateral televising program.

Report provided recommendations as to:

- Extent of lateral televising
- Basis for determining PASS/FAIL of lateral inspections
- Public Outreach
- Possible Incentive Program
- Consideration for an Appeal Board
- Proposed Implementation Schedule
MATSF Time of Sale Inspection Program

Program start date established as 6-01-07

- Article as to program placed in Township magazine
- Educational brochure developed and mailed to all customers
  - Had all program documentation and forms posted on web site
  - Sent information to numerous real estate agencies and closing companies
- Scheduled separate information meeting for real estate agents
Utilize NASSCO ratings for lateral inspection
- Level 3 defect or greater, or multiple Level 2 defects constitutes failure, or any Level 2 leak
- Requires NASSCO certified technicians

Created an appeal board (No appeals to date)

10.1% Lateral Fail Rate from 2007 through 2015

SFTMA has incentive program for lateral replacement - $1,000 plus $5/ft for >100 feet replaced (Spot repairs not eligible for incentive rebate) – Dollar amount was increased in early 2013 upon Authority Resolution to expand program to include area wide inspections

$41,849 Incentives Paid to Date
MATSF Time of Sale Program Tracking 2007 Through 2015

- Lateral Defects, 175
- Area Drains, 8
- French Drains or Sumps, 8
- Multiple Violations, 28
- Vents/ Cleanouts, 167
- Downspouts, 2

1728 Total Inspections Performed
### MATSF Dye Test/Lateral Inspection Documentation

**South Fayette Township Municipal Authority**  
P.O. Box 171  515 Millers Run Road  Morgan PA 15064  
Phone: 412-221-1665  
Fax: 412-207-2070

**APPLICATION FOR DYE TEST/LATERAL INSPECTION**  
(PLEASE PRINT OR TYPE CLEARLY)

**APPLICATION DATE:** 11/15/07

**Current Owner's Name:**  
**Test Site Address:** PHEASANT RISE COURT, BRIDGSVILLE PA, 15117  
(BOX OR STREET) (CITY) (STATE) (ZIP)

**Applicant's Name:**  
Applicant's Signature:  
**Contact Phone Number:**  
Closing Date: 12/3/07

**Does the premise have any internal sewer drains or sump pumps?**  

See instructions for test procedures and fees at www.authority.south-fayette.pa.us

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**DOCUMENT OF CERTIFICATION**  
**TEST RESULTS AND FINDINGS**

**TEST FEE AMOUNT RECEIVED:** $2,300  
**ADDITIONAL FEES DUE:**  
**BALANCE DUE:**  
**TEST PERFORMED BY:**  
**TEST DATE:** 11/27/07 8:00 a.m.

**DYE TEST:**  
- PASS  
- FAIL  
**LATERAL TEST:**  
- PASS  
- FAIL

**PASS DATE:**  
**FAIL DATE:** 27 Nov 07

**RELEASE DATE:**  
**HOLD:**

**NOTES:**  
- Sump Pump OK. Roots at 35' & 47'  
- Also roots in fresh air vent stack.

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**Property Address - 101 PHEASANT RISE CT**

1 inch equals 30 feet

- **Legend:**
  - Green Circle: Sanitary Manholes
  - Orange Arrow: Sanitary Pipes
  - Black Triangle: Road

- **KEY TO ABBREVIATIONS FOR DIAGRAM**
  - CO = FRESH AIR VENT
  - SD = DRYWELL DRAIN
  - SH = SHALLOW DRAIN
  - N = LOCATION
  - R = ROOF LEADER INTO GROUND
  - S = SURFACE EXIT LOCATED

- **NOTES:**
  - GPS Done
  - Inspection Crew: D.J. SARAC
  - Date of Inspection: 12/8/07
### MATSF Lateral Inspection Documentation

#### Inspection Report

**Date:** 11/27/2007  
**P.O.R.:**  
**Weather:** 3 Light rain  
**Surveyed By:** DOR  
**section number:** 143  
**PSR:**  
**Total Pipe Length:**  
**Survey Equipment:** South Fayette  
**System Owner:**  
**Clean Date:**  
**Pre-Cleaning:**  
**Map Grid #:**  

**Street:** PHEASANT RISE CT 101  
**City:** BRIDGEVILLE  
**Location Code:** Y Yard  
**TapeMedia #:** T.O.S. 143  

**Purpose:**  
**Day/Wk:**  
**Material:** VCP Verifed Clay Pipe  
**Pipe length:** 100ft  

**Comment:**  

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<th>Position</th>
<th>Observation</th>
<th>Coaster</th>
<th>Photo</th>
<th>Grade</th>
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<td>0.00</td>
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<td></td>
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<td>7204</td>
<td>M 4</td>
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<td>3</td>
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<tr>
<td>50.00</td>
<td>ATC: Tee Connection, at 07 o'clock, 5&quot;, 4&quot;, Remain: TAP</td>
<td>08:58:56</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Photo 720a, TapeMedia No.: T.O.S. 143, 08:54:56**  
35FT, Route Ball Joint, from 07 to 08 o'clock, 90 %, within 8 inch, YES  

**Photo 720b, TapeMedia No.: T.O.S. 143, 08:56:32**  
47FT, Material Change, VCP Verifed Clay Pipe FROM 'ABS  

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**Sheet:** BRIDGEVILLE  
**Street:** PHEASANT RISE CT 101  
**Date:** 11/27/2007  
**section number:** 143  
**PSR:**  

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**Photo 720a, TapeMedia No.: T.O.S. 143, 08:54:56**  
35FT, Route Ball Joint, from 07 to 08 o'clock, 90 %, within 8 inch, YES  

**Photo 720b, TapeMedia No.: T.O.S. 143, 08:56:32**  
47FT, Material Change, VCP Verifed Clay Pipe FROM 'ABS  

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2007 Lateral.mls 3 page: 1
MATSF CHARTIERS CREEK AREA W/O MAYVIEW
ANNUAL INFILTRATION/INFLOW ON GPIMD BASIS

- Inch Miles
- I&I GPIMD
- Annual Precipitation
- I&I GPIMD divided by Annual Precipitation

Graph showing the annual infiltration/inflow on GPIMD basis from 2000 to 2014 for the MATSF Chartiers Creek Area without Mayview.
Time of Sale Implementation Options

1. Televising performed by in-house personnel (Ex: South Fayette)
   - Requires sufficient staff (office and field)
   - Requires acquisition of televising and associated equipment necessary to perform the work

2. Televising performed by registered master plumber under the direct field supervision of municipal representative (Ex: Fox Chapel/Ohara)

3. Televising performed by registered master plumber with a completed form and copy of video submitted to municipality (Ex: North Fayette)
   - Internal review by municipality of data submitted is presumed to be performed for quality control/consistency of pass/fail interpretation
   - Plumbers performing the work would need to have access to municipal sanitary sewer mapping

4. Contracted service via bid process (Ex: Collier Authority – currently for basic dye test only)
   - Enhances consistency of implementation/reporting
   - Property owners generally pay the same fee for the service
Other Time of Sale Considerations

- Public Education Program Development
- Establish Definition of lateral ownership
  - Property owner responsible for lateral to the sewer main OR
  - Property owner responsible for lateral to public right-of-way
- Establish clear definition of Pass/Fail criteria
  - NASSCO ratings – generally not used by master plumbers
  - Any visible defect – may be considered somewhat arbitrary
  - Visible leak – generally only occurs during wet weather or high ground water conditions that often will not exist during time of sale unless significant quantity of water is injected near pipe zone during test
- Consideration for financial incentives or other financial assistance to property owners.
  - Pa legislation not yet in place to formalize legality of this option, but has been attempted over several sessions. Current related bills include HB-801, SB-381 and SB-288
KEY Lessons Learned/Suggestions

1. In any private sector program, the committee concurred that customer education was the most important aspect of the program implementation
   - Requires property owners to be part of the solution to system O&M. Viewed as a consumer protection benefit by the purchaser of a property

2. Committee members concurred that proactive public sewer rehabilitation must also be a priority of the municipal entity

3. Development of a good tracking system is essential to efficiently compile program statistics – detailed forms, spreadsheets, GIS integration

4. Flow reduction effectiveness of a time-of-sale based lateral program is questionable especially on a short term basis. Committee members concurred that an area wide lateral inspection program would likely be more effective for flow reduction if conducted prioritized on documented areas with high infiltration.

5. Each community should thoroughly evaluate potential program options/logistics at the local level and act accordingly
QUESTIONS