

# 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

# FSWG Private Sector Subcommittee (Cont.)

- 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

# FSWG Private Sector Subcommittee (Cont.)

- 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





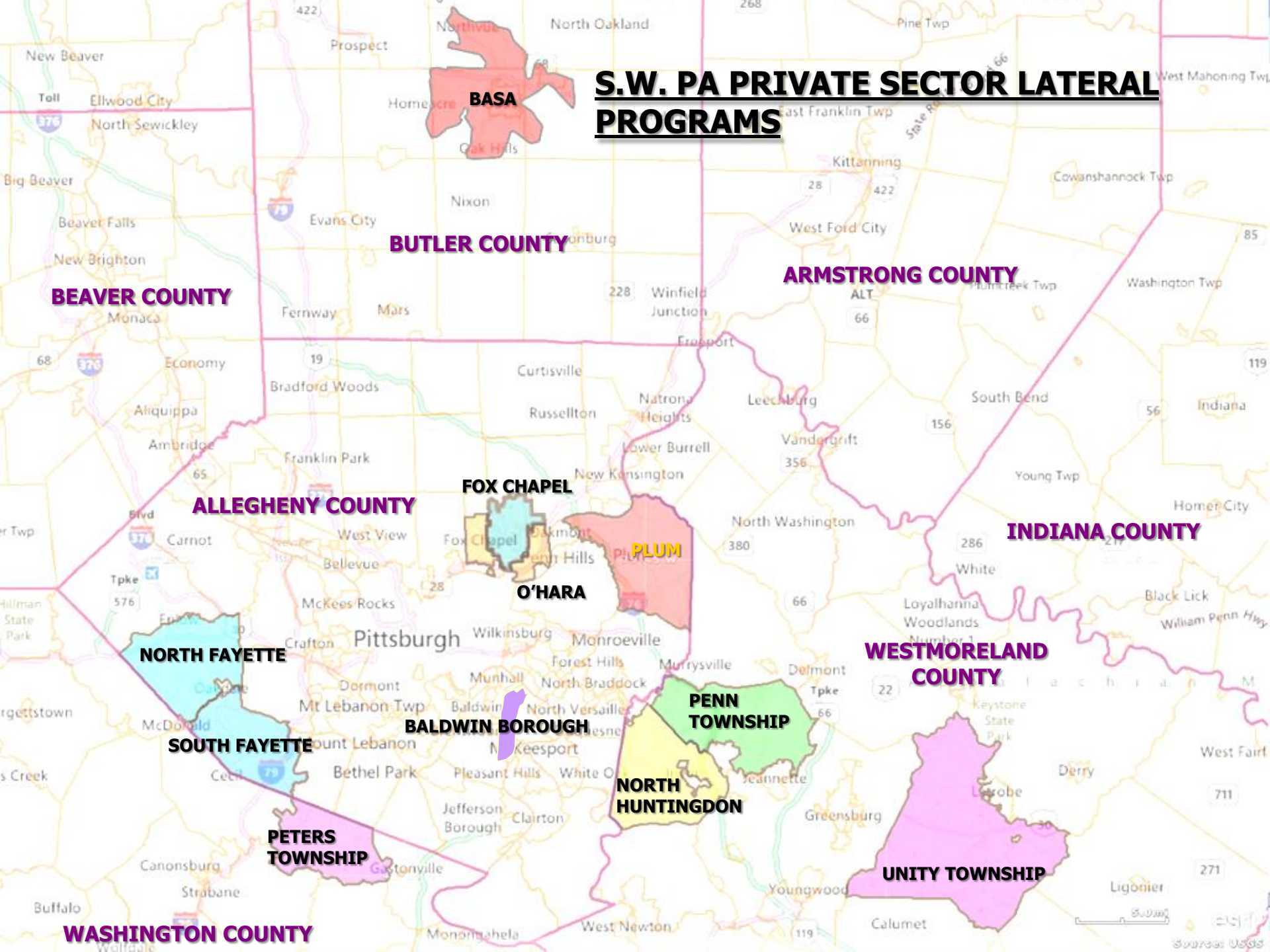
# Example of Lateral Defect



# 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

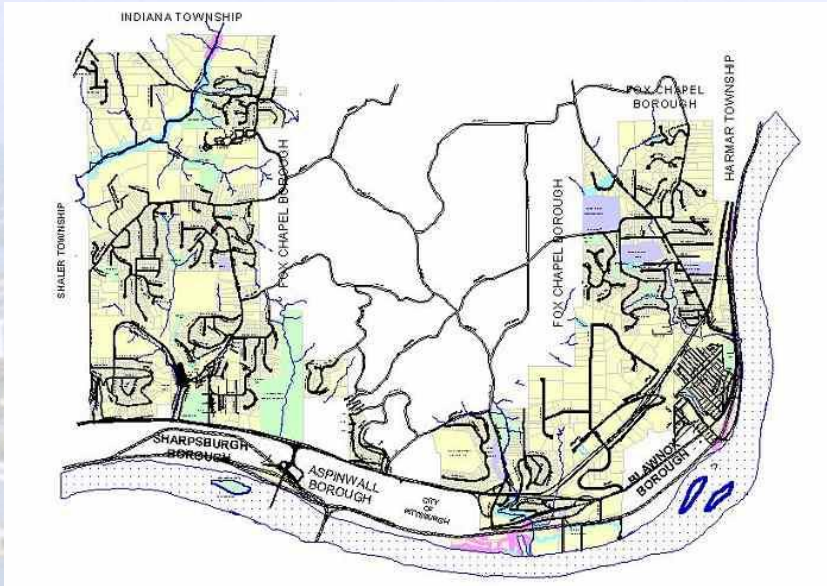
# Fox Chapel Borough

- 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)



# O'Hara Township

Allegheny County



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



# O'Hara Township

- 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

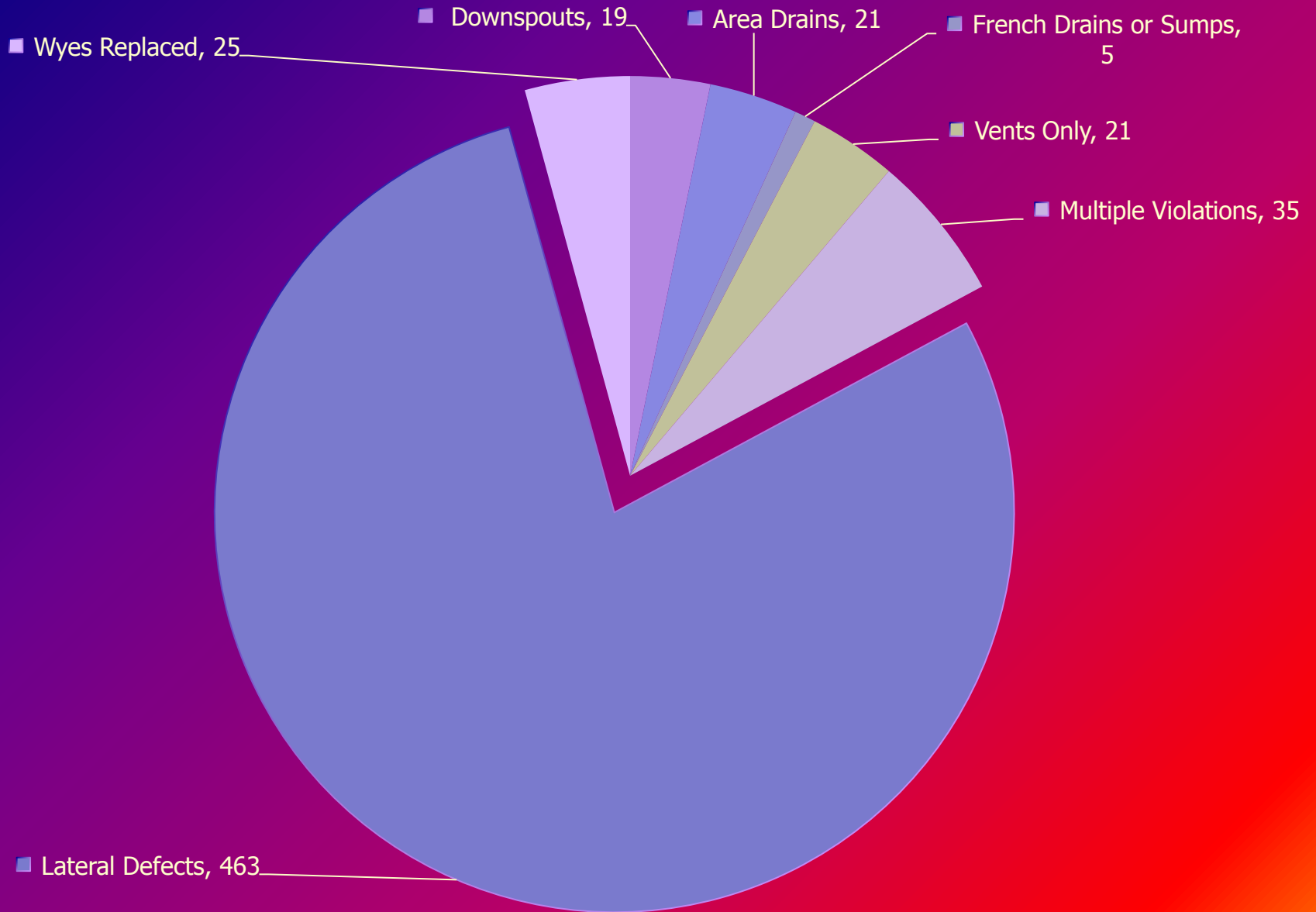


# O'Hara Township

- 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



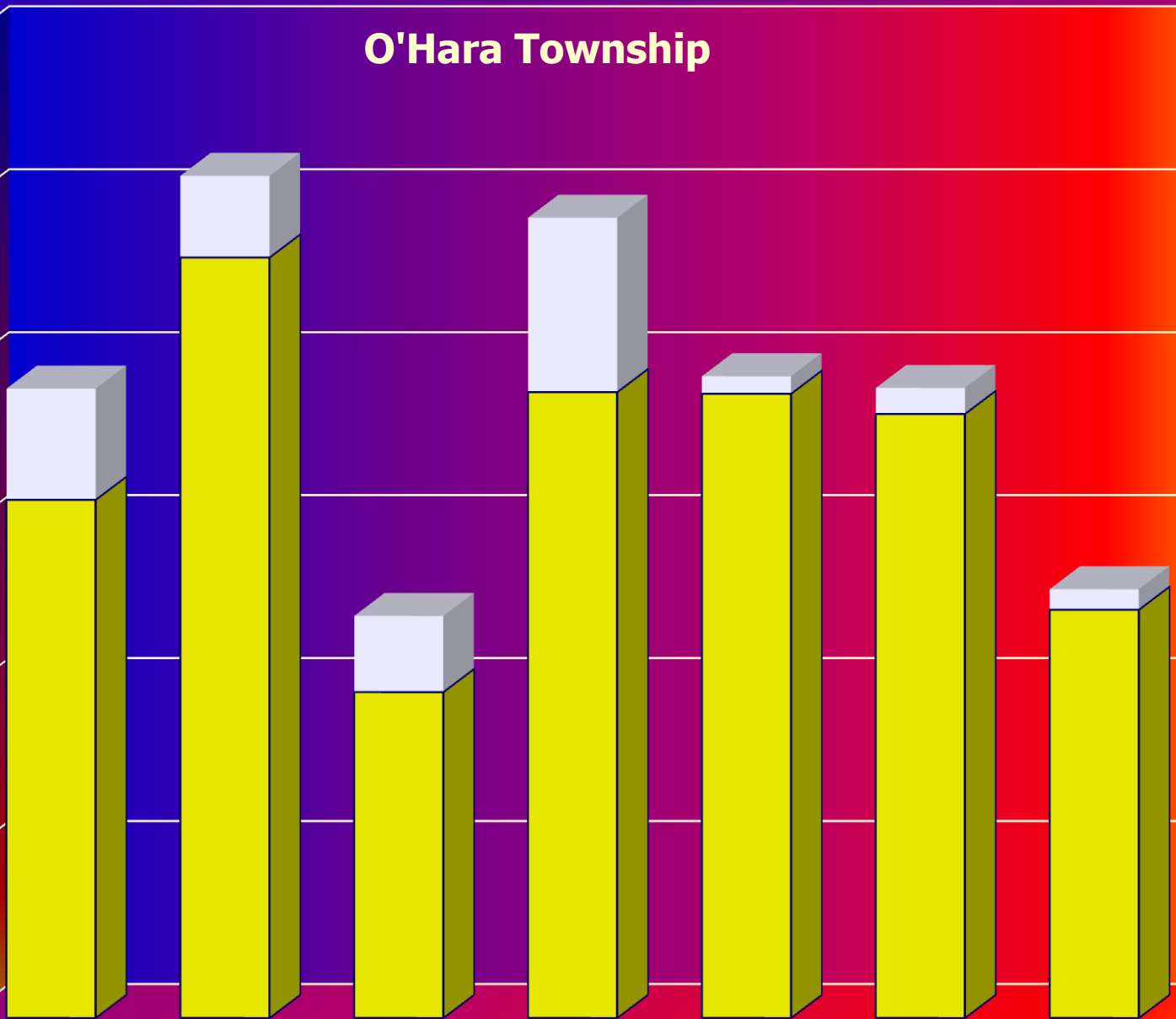
# O'Hara Township 2005 Through 2011



# O'Hara Township

Lateral Replaced or Relined  
Feet

6,000  
5,000  
4,000  
3,000  
2,000  
1,000  
-



■ Partial Replace/Rehab  
■ Full Replace/Rehab

	2005	2006	2007	2008	2009	2010	2011
Partial Replace/Rehab	682	501	467	1,070	107	159	126
Full Replace/Rehab	3,180	4,667	2,000	3,841	3,831	3,707	2,505

# South Fayette Township Municipal Authority

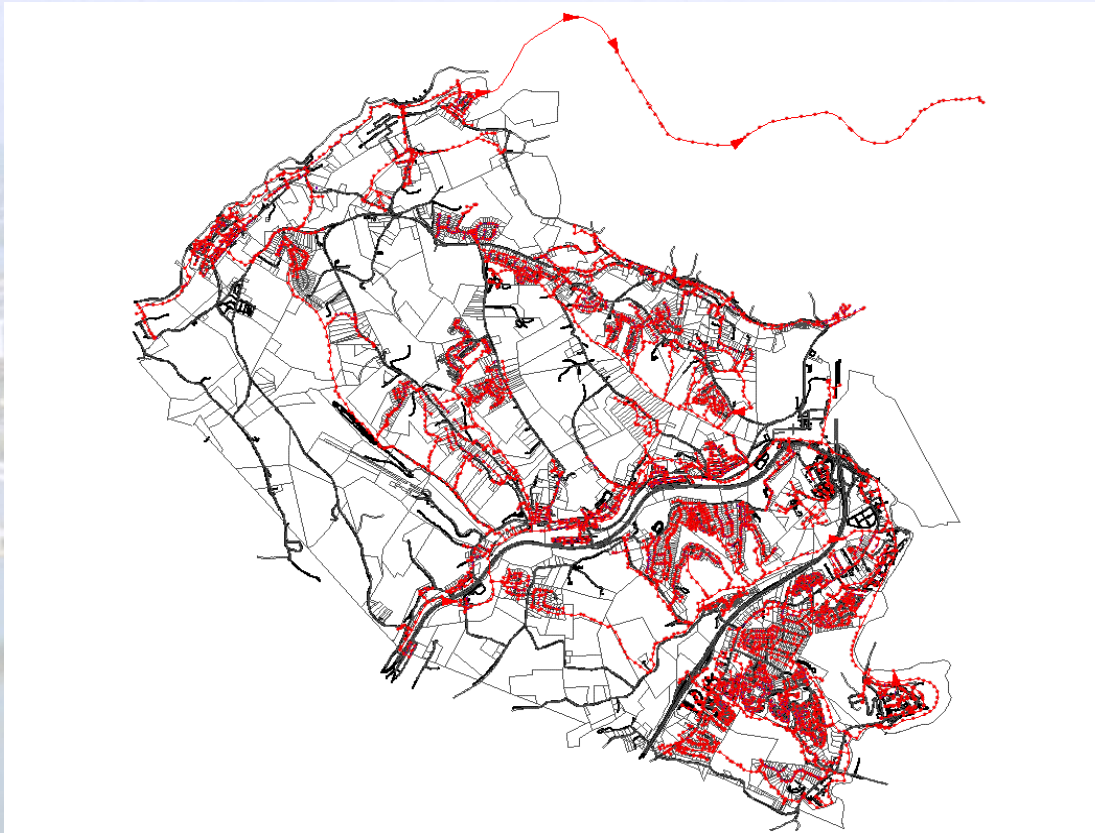
## Allegheny County

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

# 2006 MATSF Needs Documentation Report

- 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

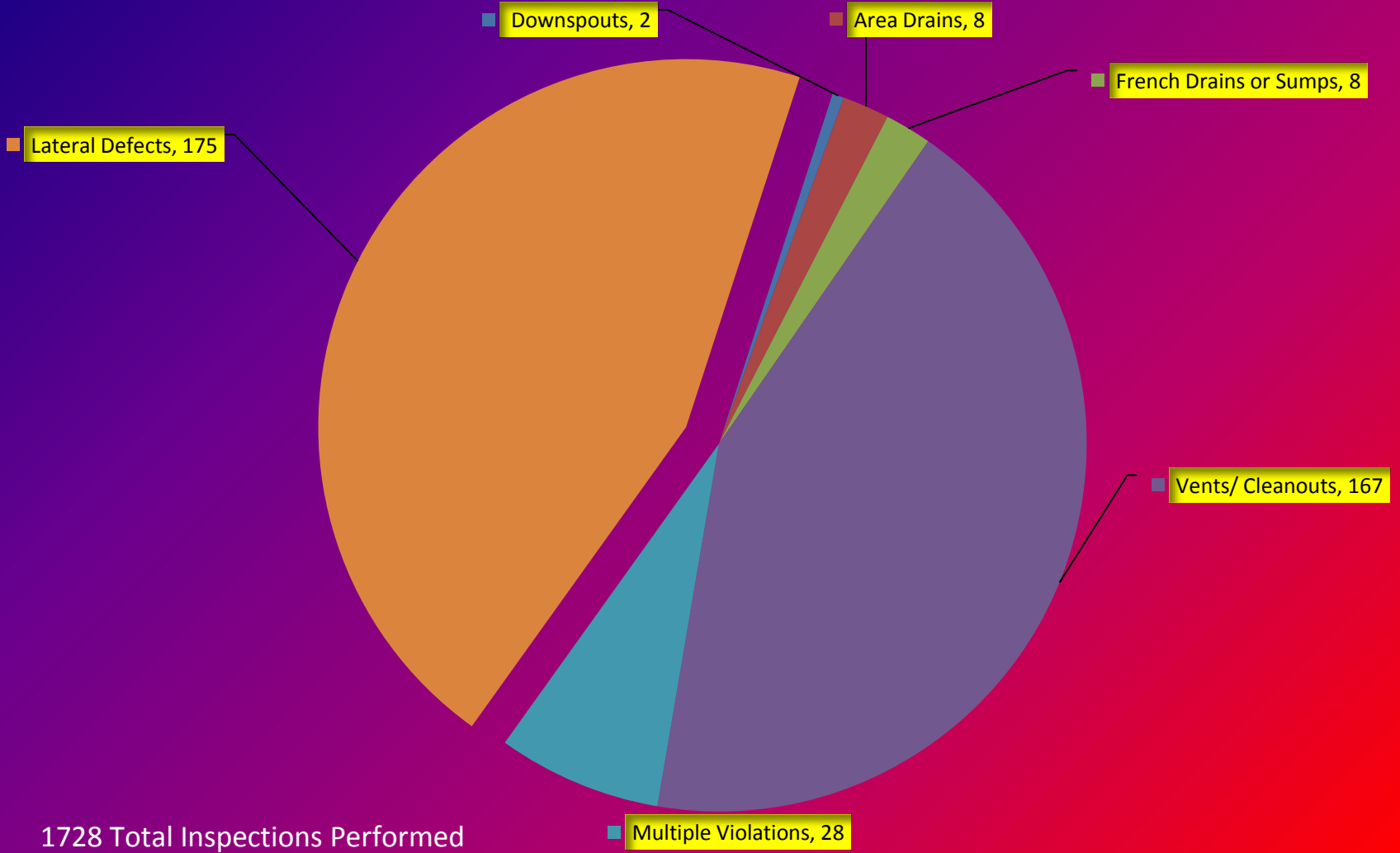
- Article as to program placed in Township magazine
- Educational brochure developed and mailed to all customers
  - Had all program documentation and forms posted on web site
  - Sent information to numerous real estate agencies and closing companies
  - Scheduled separate information meeting for real estate agents

## MATSF Time of Sale Inspection Program (cont.)

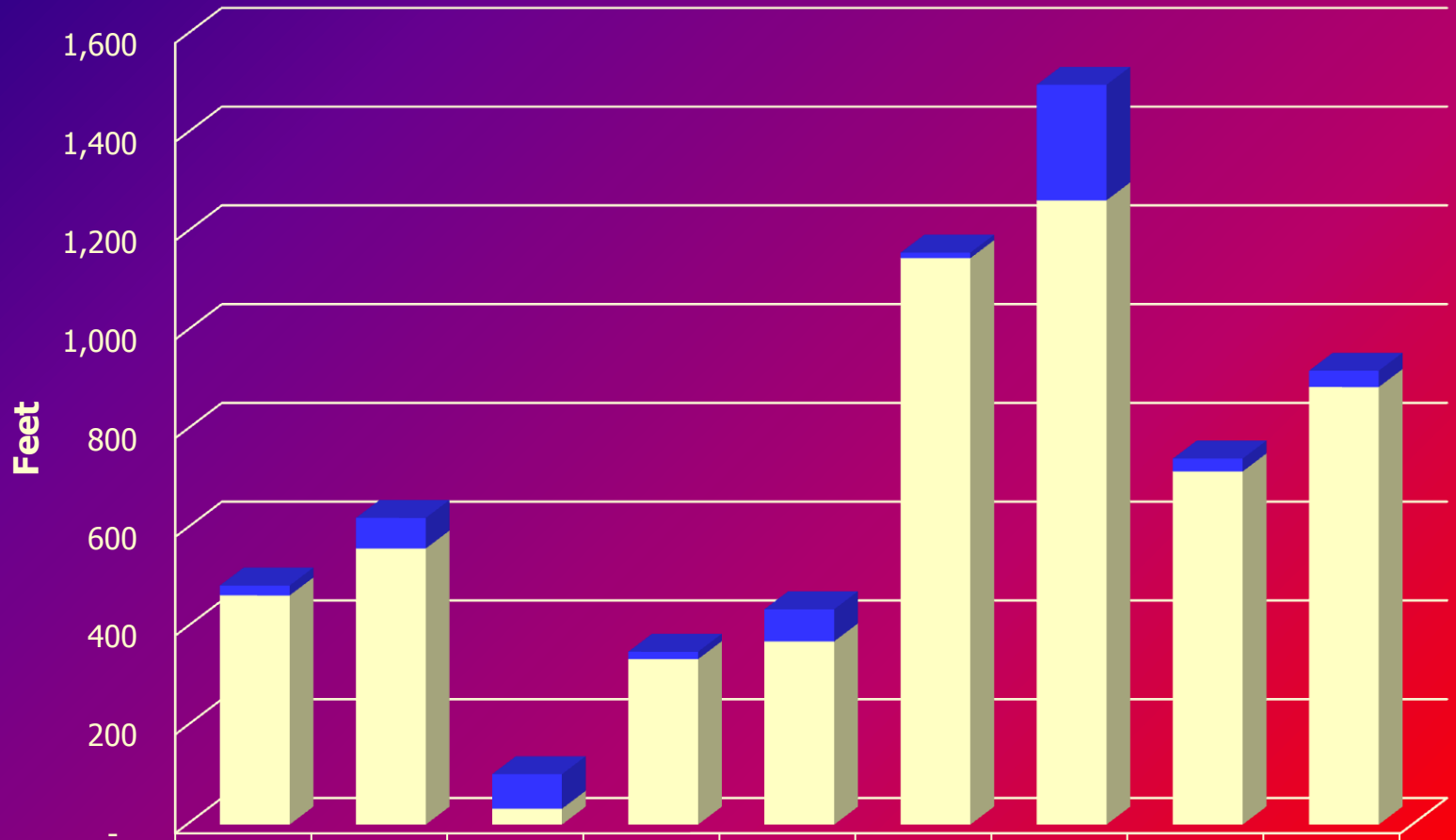
- Utilize NASSCO ratings for lateral inspection
  - Level 3 defect or greater, or multiple Level 2 defects constitutes failure, or any Level 2 leak
  - Requires NASSCO certified technicians
- Created an appeal board (No appeals to date)
- 10.1% Lateral Fail Rate from 2007 through 2015
- SFTMA has incentive 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



# MATSF T.O.S. Lateral Replacement



	2007	2008	2009	2010	2011	2012	2013	2014	2015
■ Spot Replace/Rehab	20	62	70	15	65	11	234	26	33
■ Full Replace/Rehab	464	559	32	335	371	1,147	1,264	715	886

# 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: 412-257-2079

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

APPLICATION DATE: 11.15.07

Current Owners Name \_\_\_\_\_  
 Test Site Address PHEASANT RISE COURT, BRIDGEVILLE PA, 15017  
 (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 french drains or sump pumps?  YES  NO

See instructions for test procedures and fees at [www.authority.south-fayette.pa.us](http://www.authority.south-fayette.pa.us)

(DO NOT WRITE BELOW THIS LINE \*\*\*\* AUTHORITY USE ONLY)

**DOCUMENT OF CERTIFICATION**

**TEST RESULTS AND FINDINGS**

TEST FEE AMOUNT RECEIVED: pd 150<sup>00</sup> 2200  
 ADDITIONAL FEES DUE: \_\_\_\_\_ NOTES: \_\_\_\_\_  
 BALANCE DUE: \_\_\_\_\_  
 TEST PERFORMED BY: \_\_\_\_\_ TEST DATE: 11-27-07 8:00 AM  
 DYE TEST:  PASS  FAIL LATERAL TEST:  PASS  FAIL  
 PASS DATE: \_\_\_\_\_ FAIL DATE: 27 NOV 07  
 RELEASE DATE: \_\_\_\_\_ HOLD: \_\_\_\_\_  
 NOTES: Sump Pump OK - ROOTS AT 36' & AT 47'  
ALSO ROOTS IN FRESH AIR VENT STACK.

TEST# \_\_\_\_\_



Property Address - 101 PHEASANT RISE CT

1 inch equals 30 feet

<p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="color: green;">●</span> Sanitary Manholes</li> <li><span style="color: red;">—</span> Sanitary Pipes</li> <li>— Parcels</li> <li>— Cartways</li> </ul>	<p><b>KEY TO ABBREVIATIONS FOR DIAGRAM</b></p> <p>FA = FRESH AIR VENT                  CO = CLEANOUT                  ST = SIGHT TEE                  RLG = ROOF LEADER INTO GROUND                  RLG/S = ROOF LEADER INTO GROUND / SURFACE EXIT LOCATED</p>		<p>NOTES:</p> <p><u>GPS Done</u></p> <p>Inspection Crew: <u>DR BC</u>                  Date of Inspection: <u>27 NOV 07</u></p>
	<p>DD = DRIVEWAY DRAIN                  AD = AREA DRAIN                  SW = STAIRWELL DRAIN                  CD = CATCH BASIN</p> <p>WATER INJECTED  <input type="checkbox"/> YES <input type="checkbox"/> NO</p>		

\* - SFTMA is not responsible for the accuracy of the geographic information displayed on this map.

# MATSF Lateral Inspection Documentation

**WinCan** S. Fayette Twp. Municipal Authority  
Morgan, PA  
Tel: 412-221-1665, Fax: 412-257-2079

### Inspection report

Date: 11/27/2007	P.O.#:	Weather: 3 Light rain	Surveyed By: DON	section number: 143	PSR:
Total Pipe Length:	Survey Customer: South Fayette	System Owner:	Clean Date:	Pre-Cleaned: N No Pre-Cleaning	Map Grid #:

Street: PHEASANT RISE CT_101	Flow Control:	Start MH: FA
City: BRIDGEVILLE	Year Renewed:	End MH: TAP
Location Code: Y Yard	Tape/Media #: T.O.S. 143	Total length: 50 ft

Purpose: T Time of Sale  
Use:  
Drain Area:  
Comment:  
Location details:

1:125	position	code	observation	counter	photo	grade
	0.00	ACOH	Cleanout House, Remark: FRESH AIR VENT <i>(IN VENTILATE SYSTEM)</i>	08:50:59		
	0.00	RMB	Roots Medium Barrel, at 09 o'clock, 30 %, within 8 inch: YES	08:51:10		M 4
	1.00	MMC	Material Change, VCP Vitrified Clay Pipe FROM ABS	08:53:19		
	35.00	RBJ	Roots Ball Joint, from 07 to 05 o'clock, 90 %, within 8 inch: YES	08:54:56	721a	M 4
	45.00	MMC	Material Change, VCP Vitrified Clay Pipe TO ABS	08:58:21		
	47.00	MMC	Material Change, VCP Vitrified Clay Pipe FROM ABS <i>WITH ROOTS</i>	08:58:32	723a, b	M 4
	50.00	ATC	Tee Connection, at 03 o'clock, 6", 8", Remark: TAP	08:58:58		

OSR	OSR	SPR	MPR	OPR	SPRI	MPRI	OPRI
0000	4200	0	8	8	0	4	4

2007 Laterals.mdb // page: 1

**WinCan** S. Fayette Twp. Municipal Authority  
Morgan, PA  
Tel: 412-221-1665, Fax: 412-257-2079

### Inspection photos

City: BRIDGEVILLE	Street: PHEASANT RISE CT_101	Date: 11/27/2007	section number: 143	PSR:
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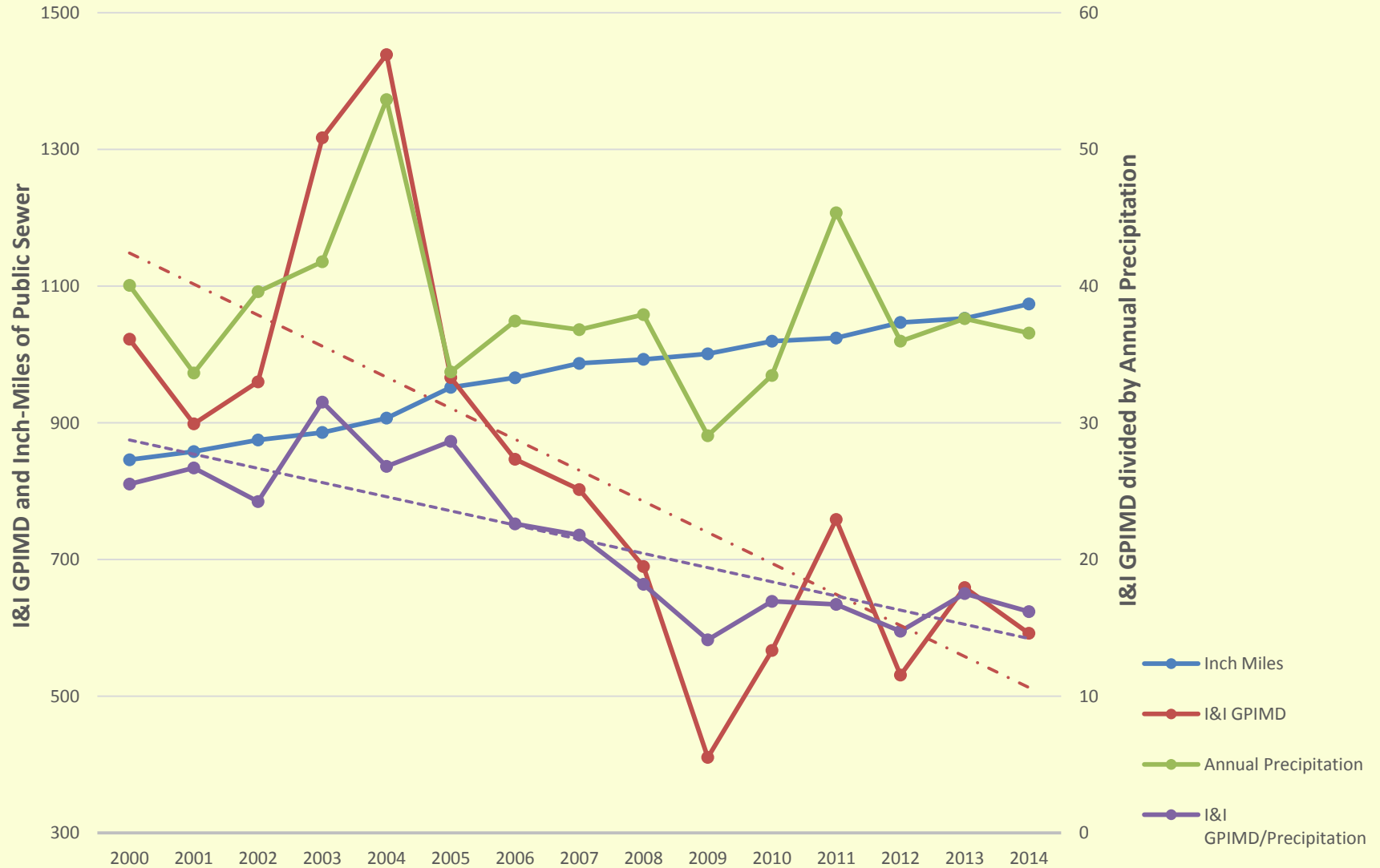
Photo: 721a, Tape/Media No.: T.O.S. 143, 08:54:56  
35FT, Roots Ball Joint, from 07 to 05 o'clock, 90 %, within 8 inch: YES

Photo: 723a, Tape/Media No.: T.O.S. 143, 08:58:32  
47FT, Material Change, VCP Vitrified Clay Pipe FROM ABS

Photo: 723b, Tape/Media No.: T.O.S. 143, 08:58:32  
47FT, Material Change, VCP Vitrified Clay Pipe FROM ABS

2007 Laterals.mdb // page: 2

# MATSF CHARTIERS CREEK AREA W/O MAYVIEW ANNUAL INFILTRATION/INFLOW ON GPIMD BASIS



# 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