PRIVATE LATERAL PROGRAM QUESTIONNAIRE

The WEF Collection System Committee is primarily interested in successfully operating programs for work performed on the privately-owned portion of the lateral line; e.g., building service connection. We want to assemble policy descriptions, enabling resolutions or ordinances, funding details, public education/information materials, standard design or construction details, etc., for programs that have proven to be successful. This specific program documentation will be made available to other wastewater utilities through a virtual private property program on-line library.

While we are interested in "planned" programs, we want to first concentrate on programs that have been demonstrated to have been effectively implemented. Planned programs will be included in the virtual library after the program has been implemented and actual experience with the program is available.

Program descriptions of private lateral programs that were previously implemented, but considered "failed" or only "partially successful" will be included if the reasons for the problems with the program have been identified and can be included as a "lessons learned" component of the virtual library.

Interview Conducted by	WEF Representativ	ve: Name:	Jane McLamarrah		
		Date:	December 12, 2007		
1. General Information					
Utility Name & Location:	Miami Dade Water	& Sewer Depa	rtment (WASD); Miami-Dade County, Florida		
Contact Name & Details:	Rodney (Rod) Lovett (rodlo@miamidade.gov)				
	3071 S.W. 38 th Avenue, Miami, FL 33146 305/665-7477 (Customer Service)				
	305/254-5871				
Utility Characteristics:	340,000 Nun	nber of Custom	ers (approximately 2 million people)		
	Nun	nber of Taps			
	3,724 Tota	l Miles of Pub	ic Sanitary Sewers (separated sewers and combined sewers)		
			mbined Sewers (sanitary only, not including storm sewers) em that is combined if total miles is unavailable or unknown)		
		basements (thuicate yes or no)	s potentially sump pump connections) typical in your area?		
	municipal Utili	ity Type (muni	cipal government, special purpose district, private utility, etc.)		
2. Lateral Definition Private Lateral Definition: (check definition that appl		g to ROW/Ease	ement Line Only		
	(Note if	(& how) utilit	y treats laterals in easements differently than laterals in ROWs)		
	Buildin	g To Tap on Se	ewer Main Line		
	Other (\$	Specify details)			
	building	g laterals – this	y treats residential building laterals differently than commercial may affect responses to subsequent questions)		
Cleanouts: (check all that apply)	Required Usuall Exists				
	<u>X</u> <u>X</u>	_ At buildin	g		
	X	_ At ROW	only about 20% have cleanouts at ROW		
		At easeme	nt		

1

3. Lateral Program Description

sheets as needed). If utility operates more than one private lateral program, it may be preferable to complete a separate questionnaire form for the remaining questions for each of those private lateral programs. Lateral Maintenance (e.g., cleaning, root control, etc.): Lateral Repair (e.g., point repairs, etc.): Lateral Replacement: X I/I Control (Specify type; e.g., cleanout caps, sump pump disconnect, downspout/yard drain disconnect, backflow preventer installation, etc. If basements are typical in area, where are building owners directed to connect the foundation or tile drain lines that have to be disconnected?): An Initial Lateral Pilot Program was initiated in 1999 to address I/I and to determine the effectiveness of performing lateral inspections. In January 2002, the EPA approved a more extensive program, the Comprehensive Lateral Investigation Program (CLIP) to help address the I/I and RDI/I (Rainfall Dependent I/I) issues. Federal matching funds were obtained to partially offset program costs. CLIP tasks included initially identifying 30 typical system collection basins (later expanded to over 50 basins) and performing air pressure tests on each lateral, performing repairs on all public laterals that failed the pressure test. Program costs were to be monitored and cost effective analyses of the CLIP at reducing system flows would be developed. The WASD would also issue a CLIP report to describe the program in detail (see Comprehensive Lateral Investigation Program (CLIP) Preliminary Draft Report, WASD, May 2006 at http://www.miamidade.gov/wasd/SSO/library/Lateral Testing.pdf for the preliminary report. The County Attorney would not allow public money to be spent on construction or maintenance on private property, but would allow an air test if the property owner agreed to the test. The Public Outreach Program had a 70 percent response rate with 96 percent of the respondents allowing the air pressure test to be performed. The following tables summarize the public response and testing results.

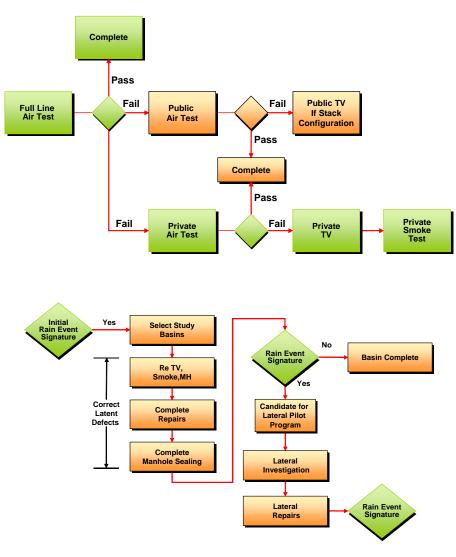
Type of Lateral Program (check all that apply and describe program – try to be brief in program description, but add separate

Description	No. of Letters	% of Total Letters Distributed
Total notification letters distributed	9,202	100%
YES – Responses granting property access	6,291	68.4%
1 st Tier	6,173	
2 nd Tier	1,542	
Direct	118	
NO – Responses denying property access	252	2.7%
1 st Tier	148	
2 nd Tier	202	
Direct	105	
Total responses	6,543	71.1%
Pending responses	2,659	28.9%

Lines Tested	Number	Percent
Laterals Tested	6,861	100.0%
Public Side		
Pass	4,341	64%
Fail	1,791	27%
CND	601	9%
Private Side		
Pass	3,768	55%
Fail	649	10%
CND	2,059	30%
N/A	385	6%

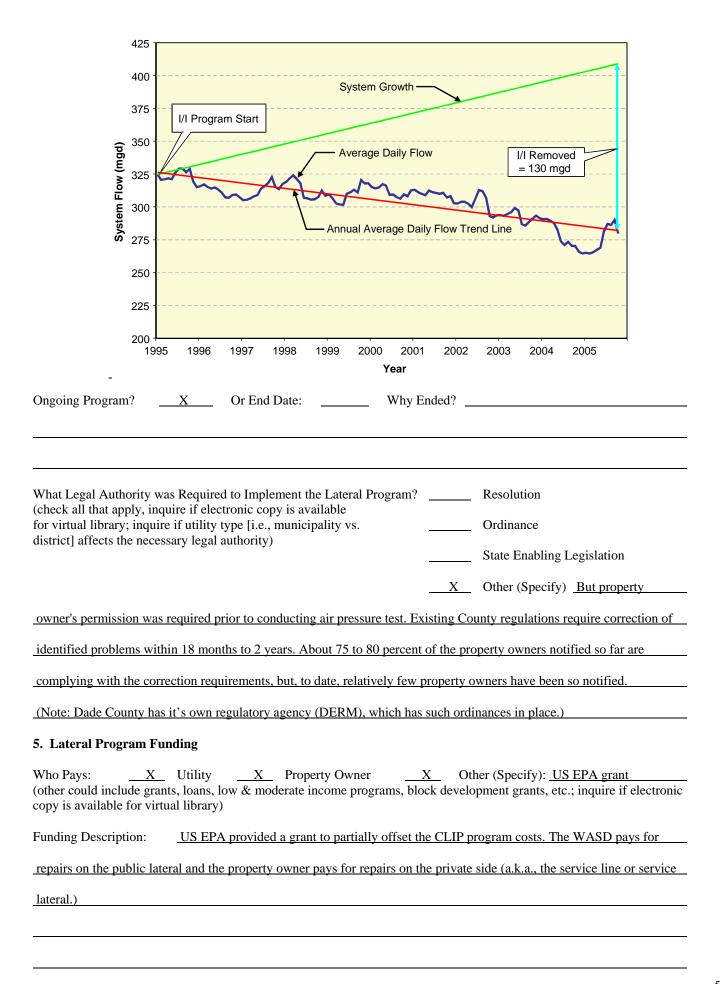
CND = could not determine

The following flow charts show the lateral inspection protocol and the lateral pilot program protocol.



Public side laterals that failed the pressure test were televised if they were over 6-feet deep; otherwise it was more economical to dig and replace. Private side laterals that failed were televised and smoke tested to prove to the property owner that they were defective. County regulations required correction within 18 months to 2 years, but only a few private property owners have yet been notified.

	Specify conditions; e.g., when utility relocates main, etc. Specify special situations; e.g., ing building plumbing changes or extensive lateral relocation):
Lateral Inspections (Specify conditions; e.g., point of sale, special utility project, etc.):
New Connection Per	mitting (e.g., special coordination with Building Codes, etc.):
New Connection Enf	orcement Mechanisms:
4. Lateral Program Impleme	ntotion
Why in (e.g., co	plemented? MWSD had decreased treatment plant average daily flows over the last 10 onsent order/decree, reduce CSOs/SSOs, obtain capacity to alleviate sewer moratorium, more ective than "old" program, etc.)
years (since 1995), as required	under a US EPA Region 4 enforcement action, with an effective I/I program (see the
below graph for an indication	of the I/I removal effectiveness); however, peak flows (RDI/I) continued to exceed
treatment and transmission cap	acity during major storms. Since the laterals were the only collection system component
not addressed under the initial	I/I program; first a pilot lateral program, and then the more extensive CLIP program, was
developed to evaluate the effect	tiveness at reducing both I/I and RDI/I flows. WASD has about 1,000 pump station
basins.	



6. Program Construction

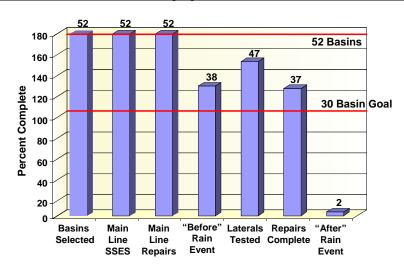
Who Does the Work:	<u>X</u>	Utility Internal Forces	X	Utility Selects & Pays Contractor
	<u>X</u>	Property Owner		Property Owner But Only From Utility List
		Other (Specify:)		
Construction Description:	Either WA	ASD internal forces or WA	ASD-paid c	contractors perform the work on the public
lateral and the property o	wner perfor	ms the work on the privat	e service la	ateral. For the public lateral work, WASD
obtained unit prices for v	arious repair	r technologies through a c	competitive	bidding process. The following tables

Item	Number
Dig and Replace (MSWASD)	971
Cured-In-Place (METRO/ESG)	97
CIP Mainline (METRO/LINK)	102
CIP Liner (METRO/TRIPLEX)	52
Total Items to Repair	1,222

Program	\$/foot	gpm removed/ foot	\$/gpm removed
Mainline Program	\$8.68	0.024	\$362
Lateral Program	\$27.70	0.012	\$2,308
Total Program	\$36.38	0.036	\$1,011
Pump and Treat Alternative			\$8,645

The overall program status is illustrated in the following figure.

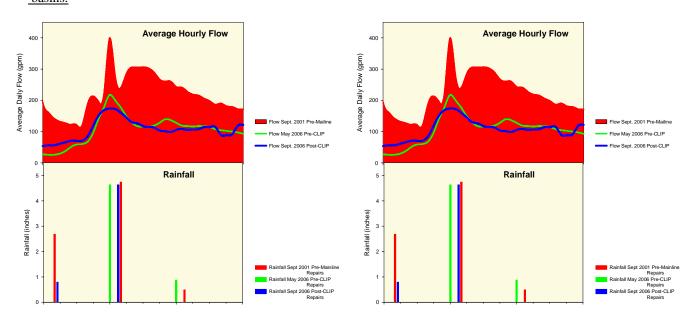
summarize the numbers of each type of public lateral repair and the program costs.



The following graph illustrates the estimated effectiveness of the basin mainline gallon per minute (gpm) I/I reduction.



The following graphs illustrate the estimated effectiveness of the I/I reduction in terms of peak flows for two specific basins.



Construction Details: Are standard details/specifications used? Yes Are electronic copies available? Yes

Describe/List Details:

7. Public Education/Information P	rogram			
How is Lateral Program Publicized?	<u>X</u>	Door hangers	Are electronic copies available?	
		Bill stuffers	Are electronic copies available?	
	<u>X</u>	Meetings	Are electronic copies available?	
		Brochures	Are electronic copies available?	
	<u>X</u>		Are electronic copies available? ty owner with CCTV still shot of l cone] problem, provide picture of red, etc.)	ateral interior, field
		Other (Specify)	Are electronic copies available?	
Additional Description of Material(s)	: <u>In th</u>	e specific study area b	asins, a direct mailing campaign to	ook place. WASD
followed up after a second letter. Wh	nen contr	actors began working	in the basin, door hangers were hu	ing. Customers were
notified of pass/fail air test results an	d, when	possible, problems we	ere identified for the property own	er.
8. Lessons Learned				
What Would You Do Differently? <u>I</u>	Tuture pl	ans include: 1) Collec	t data during rain event to identify	RDI/I for
remaining basins; 2) Identify high R	.DI/I bas	ins; 3) Complete later	al program for high RDI/I basins;	and 4) Continue
lateral program at a maintenance leve	el at higl	n RDII basins.		
What Performance Measures Are/We	ere Used'	? Estimated mainline	gpm reductions; peak flow reduc	tions
(e.g., plant flow reduction, CSO/SSC moratorium lifted, etc.,) Describe rest	reduction	on, basement backup re	eduction, service call (roots, etc.,)	
As noted in various graphs and table	s inserte	d as examples in earlie	r sections of this questionnaire, th	e CLIP program
appears to have been successful with	a 73 per	rcent peak flow reducti	ion in Basin 80 and a 73 percent p	eak flow reduction
in Basin 195. Recent comparable 2-y	ear raint	fall event data is still b	eing analyzed to determine peak f	low reduction –
primarily due to very detailed mainli	ne repai	rs and public lateral rep	pairs.	
Lessons Learned: So far different m	ainline r	repairs have proven mo	ost cost-effective in I/I reduction.	With recent rainfall
data now being evaluated with storm	event fl	ows, a better cost/bene	efit picture will be able to be determ	mined with respect
to RDI/I and peak flows. It appears to	o be 2.5	to 10 times more cost-	effective to diligently correct the l	/I and RDI/I than
to build new transmission, treatment	and disp	oosal capacity.		

9. Follow-Up Electronic Submittal

	s to WEF Collection System Committee for Inclusion in Virtual Library? Yes
(list all items utility agrees to send b	pelow should future follow-up reminders be needed)
	t (e.g., either web site address, telephone number or email address [preferably not a rns] for inclusion in the WEF Private Lateral Virtual Library)?
	http://www.miamidade.gov/wasd/SSO/library/Lateral_Testing.pdf
WEF Tracking List of Materials:	"CLIP PD-Sw006_fn.ppt", Florida Water Resources Conference, April 16, 2007
	_